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ABSTRACT

Ten articles are presented in this volume on contrastive linguistics. The articles and authors are as follows: "Contrastive Grammar: Theory and Practice" (F. Aarts and H. Wekker); "On the Semantic and Morphological Status of Reversative Verbs in English and German" (W.-P. Funk); "The Problem of Directionality in Contrastive Studies Based on Cognitive Linguistics" (R. Kalisz); "Towards Contrastive Morphology: The Comparative Degree of Polish and English Adjectives" (A. Wojcicki); "Dutch Loanwords in Munsee: The Contrastive Phonology of Borrowing" (P. Swiggers); "Transfer and Related Strategies in the Acquisition of English Relative Clauses by Adult Arab Learners" (H. Y. Tushyeh); "On the Disparity Between Morphological and Semantic Structure of Derivatives" (B. Pasternak-Cetnarowska); "English Verbal Complements, Dutch Speaking Learners, and the Role of Length: An Investigation of Error in One Area of English Grammar" (J. P. Kirby); "Tonic Prominence and the Coding of Thematic-Rhematic Relations" (M. Pakosz); and "On Quantifiers and Negation in Czech" (A. Grygar-Rechziegel). (LB)

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THE POLISH-ENGLISH CONTRASTIVE PROJECT

PAPERS AND STUDIES IN CONTRASTIVE LINGUISTICS

VOLUME TWENTY THREE

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PAPERS

CONTRASTIVE GRAMMAR: THEORY AND PRACTICE *

FLOR AARTS and HERMAN WEKKER

University of Nijmegen

This paper consists of two parts. In part one we focus our attention on three questions that have played a major role in the contrastive analysis debate since the 1950's (see Aarts, 1982):

1. What is a contrastive grammar?
2. What are the goals of a contrastive grammar?
3. How are these goals to be achieved?

Our conclusion will be that a pedagogical contrastive grammar of two languages need not be based on a particular linguistic theory. The contrastive grammarian should be free to base his description on more than one theory, provided he succeeds in finding a pedagogically suitable format for the presentation of his findings.

In the second part of this paper we will present a brief outline of the contrastive grammar of English and Dutch that we have written at the University of Nijmegen (Arts and Wekker, 1987).

1. *What is a contrastive grammar?*

A contrastive grammar of two languages may be defined as an attempt to systematically compare the grammars of these languages. Ideally, in order to be adequate, such a comparison must meet at least three criteria. First, it should involve all levels of linguistic organization. In other words, a contrastive grammar deals with the phonological, morphological, syntactic, semantic and pragmatic levels of the two languages concerned. Secondly, a contrastive grammar should be bidirectional, that is, it should pay equal attention to both languages that are being compared. Thirdly, a contrastive grammar should be nonselective. This means that it should deal not only with contrasts, but also with similarities.

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* An earlier version of this paper was read at the second FUSE Conference on English Language Research, held at the Free University, Amsterdam, on 25 January 1985.

A contrastive description of two languages may be said to yield at least four sets of statements:

1. a set of statements about items;
2. a set of statements about structures;
3. a set of statements about meanings;
4. a set of statements about pragmatics.

Each statement at each linguistic level may be regarded as a definition of some regularity or rule. A contrastive description of two languages may thus be viewed as a comparison of their rule systems. Such a comparison enables the contrastive linguist to establish which rules are shared and which rules are language-specific. These inventories are obviously interesting both from a pedagogical and from a theoretical point of view.

It goes without saying that a contrastive grammar that meets all of the above criteria is an idealization. Complete contrastive grammars do not exist. What we have are partial, unidirectional and selective descriptions, the majority of which focus on the syntactic level, or rather on subsystems of the syntactic level. Pragmatics has been virtually neglected.

As far as Dutch and English are concerned, in spite of the considerable progress that has recently been made in the description of the two languages, both at the theoretical and the non-theoretical level, an adequate contrastive grammar is still lacking. This is particularly true of their syntax, an area where Zandvoort's *A Handbook of English Grammar* has been without a rival since its publication in 1945.

2. *What are the goals of a contrastive grammar?*

Contrastive grammars can have pedagogical as well as theoretical goals. In the early days of contrastive linguistics, the goals of contrastive grammars were considered to be purely pedagogical. It was generally believed that they could serve a useful purpose, not only for teachers, but also for students and course designers.

In the rise and development of contrastive linguistics two books played a major role: Charles Fries' *Teaching and Learning English as a Foreign Language* (1945) and Robert Lado's *Linguistics across Cultures* (1957). Both Fries and Lado were convinced that contrastive studies were indispensable tools in language teaching. Fries (1945:9) claims that

> The most efficient materials [for teaching a foreign language] are those that are based upon a scientific description of the language to be learned, carefully compared with a parallel description of the native language of the learner.

In the preface to *Linguistics across Cultures* Lado writes that

> The plan of the book rests on the assumption that we can predict and describe the patterns that will cause difficulty in learning, and those that will not cause difficulty, by comparing systematically the language and culture to be learned with the native language and culture of the student. In our view, the preparation of up-to-date pedagogical and experimental materials must be based on this kind of comparison.

Underlying the above quotations are the following assumptions:

1. the process of acquiring a second language is made difficult by interference;
2. a systematic comparison of the student's native language with the language to be acquired should reveal the differences as well as the similarities;
3. on the basis of such a comparison it should be possible to predict what students will find difficult and what they will find easy;
4. such a comparison can serve as a basis for the construction of adequate teaching materials.

Since the mid-1960's contrastive linguistics has come in for a great deal of criticism. Among the assumptions that have been challenged are the belief that contrastive studies have predictive power, that differences between languages necessarily cause learning problems and that similarities are less important than contrasts. What has not been challenged is the view that a comparison of two grammars is relevant to the teacher, the learner and the textbook writer.

Because of its didactic orientation contrastive linguistics was at first a branch of applied, rather than of general linguistics. At the 19th Annual Round Table conference in Washington in 1968, which was entirely devoted to contrastive analysis, Wilga Rivers proposed to apply Chomsky's (1966:10) distinction between a pedagogic grammar and a linguistic grammar to contrastive studies. Since 1968 it has been customary to claim that contrastive grammars can have not only pedagogical, but also theoretical goals.

If the goals of pedagogical contrastive grammars concern the solution of problems in the area of language teaching, language learning and course design, what are the goals of theoretical contrastive grammars? Broadly speaking, we can distinguish five goals. First, theoretical contrastive grammars should concern themselves with the definition of the notion 'comparability' and provide an answer to the question 'What do we compare?'. It has usually been taken for granted that comparability presupposes semantic equivalence (see Krzeszowski, 1971 and Bouton, 1976) and that the easiest cases to compare are those where semantic equivalence and formal congruence go hand in hand. In a large number of cases, however, we can speak of semantic equivalence, but not of formal identity. Secondly, it is the task of theoretical contrastive grammars to define the methodological principles that underlie the comparison of languages and to answer the question 'How do we compare?' Thirdly, theoretical contrastive grammars can be used to test the validity of linguistic theories. It is obvious that a comparison of the rules involving, say, comparative constructions, reflexivization or preposition stranding in two languages constitutes an ideal basis for testing linguistic hypotheses. Fourthly, theoretical contrastive grammars can play an important part in the study of second language acquisition, for example in elucidating the role of interference and the use of compensatory strategies. Finally, theoretical contrastive grammars may be expected to provide answers to questions relating to language typology and linguistic universals. One of their jobs is to establish how particular categories of features are realized in the languages of the world. They study the correlation between a particular property in a language or group of languages and other properties (see Hawkins, 1980 and Stassen, 1985). Given adequate descriptions, linguists should be able to gain a better understanding of the dimensions along which human languages can differ. Ultimately such comparisons should shed more light on some of the questions that modern linguists consider to be of crucial importance. According to Chomsky (1977:75), languages vary 'within fixed limits'. Lightfoot (1979:16) claims that 'the immediate goal of a theory of language is to provide a set of constraints on possible grammars'. Among the questions to be answered, then, are questions like 'What are the limits within which natural languages can vary?' and 'What are possible rules of the grammars of natural languages?'.

3. *How are the goals of a contrastive grammar to be achieved?*

It has been claimed that the goals of theoretical contrastive grammars can only be achieved with the help of descriptions that are based on the same theoretical framework. It is hard to deny this claim. There is little point in comparing language L1 with language L2, if the description of L1 is based on transformational-generative grammar and the description of L2 is couched in tagmemic, systemic or functional terms. If both descriptions employ the same framework, however, the contrastive linguist is in a much better position to test his hypotheses and to provide a comparison which enables him to point out exactly what rules the two languages have in common and what rules are language-specific. A rule-oriented approach to contrastive analysis was first proposed by Zellig Harris (1954). It has since become a standard procedure in contrastive grammar, particularly after the publication of Chomsky's *Aspects of the Theory of Syntax* in 1965. Many linguists felt that Chomsky's theory was the only viable model to be adopted for theoretical contrastive purposes. The comparison of languages, they argued, should take place at the level of deep structure, where languages were supposed to be identical or at least to contain common elements. Surface structural differences were regarded as the effect of the application of language-specific transformations. The first book to rely heavily on the work of Chomsky and on Fillmore's case grammar was Di Pietro's *Language Structures in Contrast*. Di Pietro (1971:29f.) suggests that three steps can be followed in contrasting two languages: 'The first step is to observe the differences between the surface structures of two languages' ... 'The second step is to postulate the underlying universals' ... 'The third step is to formulate the deep-to-surface (realizational) rules...'.

When we review the history of contrastive linguistics since the early 1970's, we must conclude that the role of linguistic theories in contrastive grammar has been less prominent than might have been expected. The main reason for this is presumably that developments in theoretical linguistics have been so complex and that so many different models have been proposed that contrastive grammarians have not been able to decide which model should be selected as the ideal basis for contrastive analysis. The result of this is that theoretical contrastive grammar still lacks a stable foundation.

As to pedagogical contrastive grammar, it is interesting to note that attempts to incorporate linguistic theories into contrastive analysis have not yielded results that are greatly relevant from a language teaching or language learning point of view. The question is whether it is really necessary to have a particular linguistic theory in order to achieve the goals of a pedagogical contrastive grammar. We believe that it is not. This type of contrastive grammar can be didactically adequate without utilizing a particular theoretical framework, since all it is supposed to do is to reveal the differences and similarities between two grammars, to present the linguistic facts, rather than to offer explanations for why these facts are as they are. This does not mean, of course, that linguistic theories are of no use at all. On the contrary, the contrastive grammarian should be able to borrow freely from any linguistic theory that has anything to offer that is relevant to what he is doing. The only condition is that he should be able to convert it into a pedagogically suitable format.

We should now like to give an outline of the contrastive/pedagogical grammar of English and Dutch that we have written at Nijmegen. Our grammar consists of two parts. Part One, entitled *A Concise English Grammar*, defines all the theoretical concepts and technical terms that are needed. It is a short non-contrastive English grammar, based largely on the Aarts & Aarts approach in *English Syntactic Structures* (1982), which introduces students to basic grammatical categories, concepts and terms. The purpose of Part One is to familiarize students with the metalanguage, so as to enable them to work through Part Two of the book without too much difficulty. It also serves as a brief introduction to the more comprehensive survey grammars of the Quirk *et al.*-type, which are to be studied later in the programme. Part Two of our grammar, called *The Structures of English and Dutch Compared*, contains the actual pedagogical/contrastive material. Our *Contrastive Grammar of English and Dutch* (*CGED*) is organized primarily on the basis of structures (e.g. the structure of the NP, VP, etc.), not on the basis of notions and language functions, although at appropriate places we have incorporated sections on, say, the expression of future time, or past time, etc. in English and in Dutch. In general we only deal with the familiar problem areas for Dutch students, which means that in most cases we concentrate on the differences between the two languages, and very occasionally on the similarities.

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A CONTRASTIVE GRAMMAR OF ENGLISH AND DUTCH

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Instead of discussing this table of contents in any detail, we should like to return to the main point of our paper, the relationship between modern linguistic theory (that is, predominantly TG) and its practical application in contrastive teaching materials. Unfortunately, for reasons of space we can only give one example of a case where we think it may be useful to bring in concepts from a recent version of transformational grammar. We want to use *WH*-movement and preposition stranding as an illustration, but we must emphasize that in our experience cases of direct applicability of the theory are rather exceptional. In the majority of cases no such appeal to TG seems to be called for. What we want to show to students in this case is:

a) that interrogative and relative *WH*-items have the same distribution and exhibit very similar patterns of syntactic behaviour; in other words, the traditional division between interrogative and relative pronouns in English and in Dutch is based on superficial differences: the underlying similarities are more interesting, and it is no coincidence that interrogative *who, which* etc. is identical with relative *who, which*, etc.

and

b) that English has a rule of preposition stranding, and Dutch has not (except with the so-called Dutch R-pronouns *waar, daar, er,* and *hier*).

Let us look, for example, at the formation of restrictive relative clauses in English and Dutch, and consider sentences (1)—(3):

English:

(1a) the man to whom you gave the money
(2a) the man who(m) you gave the money to
(3a) the man ø you gave the money to

Dutch:

(1b) de man aan wie je het geld gaf
        (?waaraan je het geld gaf)
(2b) *de man wie je het geld aan gaf
        (?waar je het geld aan gaf)
(3b) *de man ø je het geld aan gaf

The facts that emerge from this set of sentences are quite straightforward. They are the following:

- in both languages relative clauses can open with a prepositional phrase, consisting of a preposition+a relative pronoun (*to whom/aan wie*). Since *give* is a ditransitive verb, we assume that the basic English word order is: *you gave the money to WHOM*, where *to WHOM* may be moved to clause-initial position (cf. (1a). The basic word order in Dutch sub-clauses is assumed to be: *je het geld aan WIE gaf*, which after pied-piping yields: *aan WIE je het geld gaf* (cf. (1b).
- in English the preposition can be left behind (or stranded) in its original position (cf. (2a). This is only possible in Dutch with the *waar*-forms, not with *wie* (cf. (2b). The question marks in (1b) and (2b) indicate that to some

speakers of Dutch the *waar*-forms are acceptable with a human antecedent, to others they are not.

— in English after *WH*-movement with stranding the pronoun may be zero (cf. (3a). This is not possible in Dutch (cf. (3b).

In the same way, it is possible to show that *WH*-movement, involving either pied piping or stranding, is a transformation which also plays an important role in the formation of *WH*-questions. Consider examples (4)—(6):

English:

(4a) You gave the money to WHOM?
(5a) To whom did you give the money?
(6a) Who(m) did you give the money to?

Dutch:

(4b) Je gaf het geld aan WIE?
(5b) Aan wie/*Waaraan gaf je het geld?
(OK: Waaraan (i.e. aan welk doel) gaf je het geld?)
(6b) *Wie/*Waar gaf je het geld aan?
(OK: Waar (i.e. welk doel) gaf je het geld aan?)

The main difference between this set of examples and the previous one is the ungrammaticality of the *waar*-examples in (5b) and (6b), as opposed to the relative acceptability of those in (1b) and (2b). Ideally, such an approach can reveal interesting differences and similarities between the two languages. The advantage of employing theoretical insights in this way is that they can serve to bring out relationships between grammatical areas which are traditionally regarded as totally unrelated.

In a few cases we have also found it useful to adopt insights from, say, systemic grammar, which is a more surface-oriented approach than transformational grammar. One notion that we have found very convenient is that of ***rankshift***. If it is made clear to students that there is a hierarchy of sentence constituents from sentence to morpheme, and that clauses can occur within phrases before or after the NP-head, then certain syntactic problems can be presented without the introduction of too many abstractions. It is possible, for example, to deal with heavy clausal premodification in Dutch and its equivalents in English by pointing out that Dutch, very often unlike English, allows embedding of certain non-finite clauses in front of the NP-head, as in:

(7) de gisteren door Ed geschreven brief (the letter written by Ed yesterday)

or

(8) de begin volgend jaar door alle werknemers in te vullen formulieren (the forms to be filled in by all employees at the beginning of next year)

Notice that *gisteren door Ed geschreven* and *begin volgend jaar door alle werknemers in te vullen* are both non-finite clauses which have their verbs in clause-final position, while the English clauses have their verbs in non-final position.

The pedagogical approach we advocate for beginning students at tertiary level is one which makes use of linguistic theories when this seems useful. In the case of closely related languages such as English and Dutch, the Quirk grammars offer an excellent basis for comparison, and concepts and explanations from transformational grammar, case grammar or systemic grammar can be brought in whenever relevant. However, as we have argued above, there is not always the need to invoke theoretical concepts and rules. Many areas of English and Dutch syntax can be easily compared without the support of a formal theory. Examples are the article system, the personal and demonstrative pronoun systems, and other closed systems. Other areas that are fairly easy to deal with without a theory are concord phenomena, tense usage and word order.

Writing a pedagogical grammar on contrastive principles is by no means an easy matter, and theoretical eclecticism involves experimenting with alternative descriptions, besides constantly searching for a feasible compromise between foreign language teaching and linguistics.

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ON THE SEMANTIC AND MORPHOLOGICAL STATUS OF REVERSATIVE VERBS IN ENGLISH AND GERMAN*

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This paper does not aim for an elaborate contrastive presentation of the productive types of reversative verbs in present-day English and German word-formation. The contrastive issue has been dealt with in some detail by Hans Marchand (1973), and the results of his study, in my view, are on the whole convincing. Thus we have to cope with the somewhat strange fact that, although from the point of view of analysis extremely similar word-formation types can be found in the two languages (cf., e.g., E. *unload*, *desensitize*; G. *entladen*, *desensibilisieren*), the situation is strikingly different regarding productive word-formation rules. Present-day English still has three productive types (*unload*, *disconnect*,[1] *desegregate*), at least one of which (involving *un-*) can be said to be highly productive and a major pattern in the lexical competence of the speakers of English (cf. Marchand 1969:205f.; 1973:2.1.1.-2., 5.3.; Kastovsky 1982b:192 with examples of ad hoc formations). On the other hand,

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[1] Contrary to Marchand's statement (1973:5.3.), the productivity of the type *disconnect* does not seem to be restricted to "verbs beginning with *a-*"; cf. OED Suppl. s.v. *disconfirm*, *disimpale*, *disinfest*, *disinsectize* (besides *disambiguate*, *disassemble*). Rather, the type seems to be productive in general with foreign verbs with an unstressed first syllable, where it even prevails over *de-* if the verb begins with a vowel (avoiding hiatus). (Cf. also ad hoc formed *disexcite* in Cruse 1979:963, as against the physicists' *de-excite* in OED Suppl.) On the other hand, *de-* is clearly preferred if the stress is on the first syllable, irrespective of initial vowel or consonant (cf. *deactivate*, *deanglicize*, *debarberize*, *deconcentrate*, *de-escalate*, *deflocculate*, etc). It is only with initial consonants, however, that *de-* is preferred to *dis-* before unstressed first syllables (e.g., *debamboozle*, *decohere*, *decompress*, *decondition*, *decontaminate*, *dedifferentiate*, *dereserve*, *derestrict*, etc.).

German has only one rather weak type (apart from deadjectival verbs, for these see below, 2.3.), namely, the old type *entfalten*, *entladen*; its productivity is, however, not really nil (contrary to Marchand 1973:4.1.1.; cf. more recent formations such as *enthemmen*, *entkrampfen*, *entsorgen*, *enttanken*, etc.). Prefixal combinations with *de-* and *des-* are mostly adaptations from English or French (*deeskalieren*, *dekonzentrieren*, *desensibilisieren*; *desinfizieren*, etc.).

What I consider to be less convincing in Marchand's account of reversative verbs is the morphological status ascribed to these verbs. According to his analysis they are not genuine prefixations but zero derivatives. This claim will be re-examined in the present paper: most of what follows here (in particular, in sections 2 and 3) may be understood as a critical comment on this aspect of Marchand's pioneering work. Also, the recent progress in lexical semantic theory enables us to assess the semantic status of these verbs in a larger framework. A discussion of this issue can also be helpful in understanding the basic contrast between English and German word-formation in this field.

1. *'Reversative' and 'reversive' verbs: word-formation and the lexicon*

1.1. Prefixed verbs of the types mentioned above are usually termed 'reversative' verbs because of the apparent semantic effect of the prefix: it somehow 'reverses' the meaning of the base verb (for a closer account of this 'reversal' see below, 1.2., 3.3.). The notion of 'reversative' verbs (or prefixes) has been elaborated mainly in word-formation analysis and thus become a name for a syntagmatic function — as a property of the respective word-formation process and its regular products (comparable to the properties of other word-formation types such as privative and ablative verbs). It seems, however, that even if defined in this way, the phenomenon of reversativity, or reversative meaning, cannot really be confined to the field of word-formation. Once such complex verbs are coined and being used, they become part of the lexicon and enter the system of paradigmatic relationships that are characteristic of the respective lexical fields. This may be thought of as a first step of 'lexicalization' (for which see Lipka 1977:155) or a sort of 'systematic lexicalization' (cf. Kastovsky 1982a:166f.) which, however, can hardly be separated from the actual process of word-formation.[2]

The situation may be compared to that of adjectives with negative prefixes (e.g. *unjust*, *unhappy*, *impure*). Adjectives of this sort, once they are coined, do not remain just 'negative' adjectives but occupy particular positions in the structure of the lexicon, namely, as members of opposite sets (cf. *just:unjust*,

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[2] "Directional opposition" (cf. Lyons 1977:281f.; Kastovsky 1982a:136f.) is but a particular case of reversiveness (that is, unless the opposition is based on deictic meaning: e.g., *enter* : *leave* are reversives, whereas *come* : *go* are not).

happy : *unhappy*, *pure* : *impure*), gradable or non-gradable, complementary or antonymous, alongside with other pairs of (morphologically non-related) adjectives such as *good* : *bad*, *fast* : *slow*, *clean* : *dirty*, etc. This does not necessarily mean that they occupy the same, or strictly corresponding, positions on the respective scales; but their role has to be considered in the context of these general paradigmatic relations.

Similarly, reversative verbs are coined to create lexical pairs (e.g. *load* : *unload*, *sensitize* : *desensitize*, *mount* : *dismount*, etc.) which enter the large class of what has been called "the most easily recognised type of opposite" (Cruse 1979:958) by joining the neighbourhood of pairs such as *fill* : *empty*, *lengthen* : *shorten*, *rise* : *fall*, *enter* : *leave*, etc. Since this type of opposite has been named 'reversives' (rather than 'reversatives') by its principal investigator (Cruse 1979), this more or less fortuitous diversity of terms lends itself to maintaining a clear-cut terminological distinction between the planes of word-formation (or lexical morphology) and the lexicon. Thus, henceforth in this paper, I will use the term 'reversive(ness)' to designate a semantic property of lexical pairs of opposites, representing a paradigmatic relation in the structure of the lexicon, and 'reversative/reversativity' to designate a semantic property of the morphological process leading from, say, *load* to *unload*, and of the product of this process (i.e. the verb *unload*, as a morphological syntagma).

1.2. Contrary to antonyms, which as a rule denote opposite states (e.g., *happy* : *sad*, *comfortable* : *uncomfortable*, *love* : *hate*, *like* : *dislike*), reversives are dynamic opposites (denoting processes or actions) and thus always involve some 'change of state'. In seeking a definition of reversiveness, it has been justly emphasized that it is not the process or action itself (in terms of the set of activities involved) that os 'reversed' in the meaning of the opposite but indeed the change of state. That is to say, what appears to be the final state resulting from the process in one member of a pair, is the initial state, to be changed by the process, in the other member, and vice versa (cf. Cruse 1979:959). If the meaning of a given verb is formalized as CAUSE(BECOME(P → Q)), with P and Q referring to defined states, then its counterpart, in order to qualify as a 'reversive', must conform to the formula CAUSE(BECOME(Q → P)). The states in question may be determinate (as in *open* : *close*, *load* : *unload*, *enter* : : *leave*, etc.) or indeterminate (without fixed values, only relative to each other's direction, as in *lengthen* : *shorten*, *strengthen* : *weaken*, *ascend* : *descend*, *escalate* : *de-escalate*, etc.). While in the former case P and Q represent qualities such as 'open' and 'closed', etc., in the latter case they are respectively defined as 'more' or 'less' of a given quality (e.g., 'longer' — 'shorter', 'higher' — 'lower', etc.). The essential point is that the 'reversal' applies to the direction of the change of state rather than to the particular activity involved. The activity may indeed be very similar in both cases (compare, e.g., the unpicking and sewing processes involved in both *lengthening* and *shortening* a dress). If the meaning of a terminative actional verb can be summarized as 'x does something, which causes y to become P':[3]

CAUSE(DO-SOMETHING(x), BECOME(P(y)))

then it is not the 'activity' component "DO-SOMETHING" but rather the 'qualitative change' component "BECOME P" that is reversed in the meaning of the other member of a pair of reversives.

This is even more clearly brought out by the fact that the class of reversives includes not only causative (actional) but also non-causative (processual) verbs. Apart from lacking any implication of causational activities, most of these verbs do not even specify the particular kind of process (as a specific sequence of conditioning and conditioned events which might be subject to 'reversing') but simply denote the change of state, i.e., BECOME(P → Q) vs. BECOME(Q → P), in a straightforward manner. Cf., for instance, the intransitive verbs *increase* : *decrease* in sentences such as *The population in this town has increased*/*The population in this town has decreased*. Their respective

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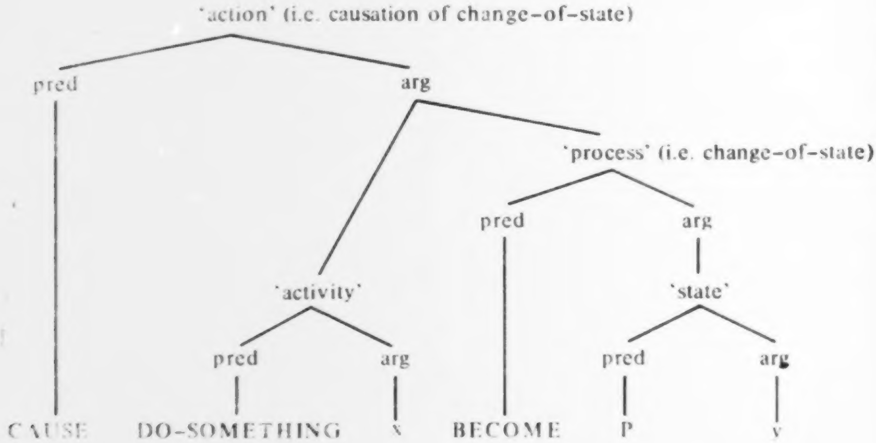
[3] For the involvement of the "DO-SOMETHING" component in this kind of formal representation of actional meaning cf., e.g., Kastovsky 1973:276ff.; Lucko 1980:67; Bierwisch 1982:73. Hereinafter, the terms 'action' and 'activity' will be used distinctively according to the following hierarchy (in terms of predicate and argument):


'action' (i.e. causation of change-of-state)
pred
arg
'process' (i.e. change-of-state)
pred
arg
'activity'
'state'
pred
arg
pred
arg
CAUSE
DO-SOMETHING
x
BECOME
P
y

This corresponds, as does the formula given above, to a basic structure to be paraphrased as 'activity causes change-of-state'. Alternatively (and closer to the semantic structure of sentences), DO-SOMETHING and CAUSE could be represented as conjoined predicates (cf. Bierwisch 1982:73), yielding 'x does something *and* causes y to become P'.

meanings 'become larger (in number)' and 'become less (in number)', referring to changes from initial to final states in opposite directions on the same scale, disregard any kind of circumstance involved in the process.

1.3. Another important point in connection with reversives is that there are different degrees of "logical dependence or independence between the members of a pair" (Cruse 1979:960), which may be used to establish sub-types of reversives according to the degree of strength with which the use of one member of a pair presupposes the previous application of the other member. Thus, for instance, reversive verbs that are semantically based on antonymous properties are, as a rule, independent of one another in their application. Cf. verbs such as *lengthen* : *shorten*, *strengthen* : *weaken*, etc.:

(1) The medicine strengthened her heart.
(2) The illness weakened her heart.

What is usually presupposed in uttering sentence (1) is that she suffers from some 'weakness', which may well be caused by an innate cardiac defect; at least if the sentence refers to a new-born baby, no particular previous 'weakening' of the heart may have occurred. Even the suggestion of abnormal 'weakness' is inferred only from extralinguistic knowledge, assuming that such a medicine is not usually administered to persons in sound health as a mere preventive measure. Otherwise the initial state could be thought of as being 'normal', as it can in sentence (2).

Focusing on word-formation now, it should be noted that morphologically dependent (i.e., derivationally related) members of a pair of reversives are not necessarily (and not as a rule) logically dependent. Cf. sentences (3)—(5):

(3) Today the first buds have unfolded.
(4) The report mystified the events.
(5) The report demystified the events.

As to sentence (3), the buds have clearly developed (and reached their 'initial state) by growing, not 'folding'. But even the utterance of sentence (5) does not really presuppose a previous 'mystification' of events but just their appearing 'mysterious' — a feeling which may be the result of an action similar to that described in (4) or not.

Some sort of logical dependence is often established by way of context; cf. (6) and (7):

(6) He uncoiled the wire.
(7) The paper unrolled and something fell out from inside.

It should be emphasized again, however, that it is not the meaning of these verbs but rather our knowledge of the world that tells us that there must have occurred an action of coiling the wire, and rolling the paper, some time before. Nothing prevents us, strictly speaking, from using the same verbs in the context of sentence (3). As a rule, however, verbs such as *uncoil* and *unroll* will be used in contexts where they can be taken to mean 'undo the result of coiling/rolling'. And there are other verbs which hardly ever permit a situational context other than that described by their unprefixed counterparts: one can only *unseal* something which has been *sealed* before, or, to quote one of the most trivial examples, the German verb *sich entloben* 'break off one's engagement' can only be applied to people who had previously undergone an engagement (=*sich verloben*).

The last-mentioned examples are in fact very close to the group of verbs with the strongest degree of logical dependence on their counterparts, which have been named 'restitutives' (Cruse 1979:960). In pairs of reversive verbs of the type *remove* : *replace*, *go away* : *return*, etc., the latter member explicitly denotes the restitution of the state that has been previously changed (and whose change is denoted by the first member of the pair):

(8) John went away after a while.
(9) John returned after a while.

While the utterance of (8) does not presuppose anything about John's *returning* or even *coming*, sentence (9) clearly presupposes that he had gone away only shortly before. Such strictly 'restitutive' meanings (the term ought to be confined to the latter members of these pairs) are typically not expressed by verbs following a reversative pattern of word-formation.

I am not going to elaborate these degrees of logical dependence here any further. The foregoing discussion of some aspects of 'reversiveness' may suffice to show that the degree of logical (and semantic) dependence between members of reversive pairs is not as a rule parallel to their morphological relatedness, or to the question whether one of them is a 'reversative' verb coined on the basis of the other.

1.4. English and German word-formation patterns have been effective in quite a number of ways in producing complex verbs which enter a paradigmatic relationship of 'reversive' opposition with other verbs. Four of these may be said to be particularly prominent:

(a) Reversative verbs (E. *demystify*, *disentwine*, *unbutton*, *unroll*; G. *entrollen*, *entmystifizieren*, *desensibilisieren*), to be paired with their respective base verbs.

(b) Privative verbs ('remove N from...', e.g., E. *desalt*, *desugar*, *dehydrogenate*, *disarm*, *disburden*, *unstopper*, etc.; G. *depigmentieren*, *entgiften*, *entsalzen*, etc.; or 'deprive ... of the quality of being A/N', e.g., E. *demineralize*, *dehumanize*, etc.; G. *entmineralisieren*, *entmenschlichen*, *entmenschen*, etc.), to be paired with the respective ornative verbs[4] (E. *salt*, *sugar*, *hydrogenate*, etc.; G. *pigmentieren*, *salzen*, *vergiften*, etc.).

(c) Phrasal verbs of several semantic types, to be paired with their phrasal opposites (E. *switch on/off*; G. *ein-/ausschalten*, *auf-/abladen*, *an-/abschrauben*, *ein-/ausschrauben*, *zu-/aufknöpfen*, etc.).

(d) Repetitive and restitutive verbs ('V again/anew', e.g., E. *recolour*, *re-embark*, *re-engage*, *reload*; G. *reprivatisieren*, *wiederbeladen*), to be paired with reversative or privative verbs such as E. *decolour*, *disembark*, *disengage*, *unload*; G. *entprivatisieren*, *entladen*. It should be noted that repetitive verbs, as a matter of course, do not form pairs of reversive opposition with the verbs they are derivationally based upon. With these they are not related by a particular lexical paradigm beyond their being related as 'base' and 'repetitive' in terms of word-formation. But just as *engage* and *disengage* (whether process or action) are reversives, so are *disengage* and *re-engage*,[5] the latter one being logically dependent on its counterpart (a 'restitutive' verb, see above, 1.3.).

2. *On defining and delimiting reversative verbs*

2.1. A definition of reversative verbs, after what has been said in the foregoing section, should take into account as necessary ingredients the following points: the paradigmatic relation of reversive opposition, the derived nature of the verb, and the specific way in which the opposition is mirrored in the morphological syntagma. Hence we may define as reversative verbs those morphologically complex (i.e., in English and German, prefixed) verbs that denote a change of state which is directionally opposite to the change of state denoted by the base verb.

This definition, in my opinion, provides solid ground for a re-examination of some peculiarities of Marchand's notion of reversative verbs.

2.2. For one thing, it follows from the above definition that the German verbs of the type *losbinden*, which are cited as the "present-day German reversative verbs" in Marchand (1973:4.1.1.) cannot properly be classified among reversative verbs. These verbs (i.e. *loshaken*, *losketten*, *losknüpfen* *loskoppeln*, *losschnallen*, *losschrauben*, *loswickeln*) are, without exception, hyponyms of *losmachen* 'unfasten' (as opposed to *festmachen* 'fasten') and their reversive counterparts are mainly complex verbs using unstable prefixes

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[4] Such pairing of privative and ornative verbs is of course a more or less occasional phenomenon (cf. Marchand 1973:1.5.; see also below, 2.4.). Although the types as wholes are reversively related ('provide with N' vs. 'deprive of N'), the particular oppositions are not strictly system-based as they are in the case of reversative verbs.

[5] Cf. Marchand (1969:189f.): "The result of the action or the former state has come nudone, and then *re-* reverses the reversal, restores the previous result or state".

(or 'pre-particles') of the 'fastening' group, in particular *fest-* and *an-* (cf., e.g., *festhaken, fest-, anketten, fest-, anknüpfen, ankoppeln, fest-, anschnallen, fest-, anschrauben*). Unprefixed verbs of the same bases are in most cases either unusual or have a meaning which is not compatible with the reversive opposition (e.g., *(ver)ketten, knüpfen*). Thus they belong to the above-mentioned group (c) ("phrasal verbs"), where many of them are matched by other oppositional pairs (such as *ein-/aushaken, an-/abketten, an-/abkoppeln, an-/ab-, ein-/aus-, zu-/aufschrauben*, etc.). This pattern provides a complex system of pro-adverbial reversive opposition in the German verb lexicon (cf. Kühnhold/Wellmann 1973:211,346), dominated by reversive hyperonyms of universal application, mostly using *-gehen* for processual (non-causative) meaning (cf. *an-/ausgehen, zu-/aufgehen*; but *sich lösen* vs. *sich festsetzen, festlaufen*) and *-machen* for actional (causative) meaning (cf. *an-/ausmachen, an-/abmachen, zu-/aufmachen, fest-/losmachen*).

On the whole, the group of phrasal verbs is the strongest among German reversive opposites, which is no surprise, given the predominant role of pre-particle modification in the verbal section of German word-formation. One of the interesting facets of this phenomenon, in contrastive terms, is the fact that the few verbs of the fastening/loosening group with stems derived from instrument nouns, which marginally exist as unprefixed verbs in German too (e.g. *knöpfen, schrauben*), are directionally undefined and have a non-terminative meaning. Thus the main reason for the fact that the well-established English type *unbutton* ('undo the fastening with N', cf. also *unbolt, unbuckle, unhook, unleash, unlock, unscrew, unseal, unzip*) has no directly corresponding German type with the prefix *ent-* (*entriegeln* is an exception),[6] is not the lack of productivity of the German reversative type (as it might appear from Marchand 1973:4.1.1.). Rather, instrumental verbs such as *haken, knöpfen, schrauben*, etc. (if at all used) do not satisfy the general condition for a verb to be changed into a reversative (cf. Kastovsky 1982b:192f.) since they do not (or at least, not definitely) denote a change of state in the sense of 'fastening' — they just mean 'do something (as) with N', irrespective of the direction, and are not normally used with objects. For this reason, any ad hoc formations of these verbs with the prefix *ent-* would more or less automatically divert into the privative pattern ('remove N from', which in these cases is quite different from 'unfasten'). It is only with the help of directionally determined pre-particles such as *an-/ab-, ein-/aus-, zu-/auf-, fest-/los-, zusammen-/auseinander-*, etc., that the actions denoted by these verbs are given a definite direction.[7]

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[6] Even *entriegeln* is possibly privative in origin; clearly privative is *entfesseln* 'die Fesseln abnehmen'.

[7] The only group of verbs that do not really need such a modifier seems to be *falten, binden, flechten*, etc. Here we find some truly reversative formations with the prefix *auf-*,

2.3. For another thing, problems will arise in connection with Marchand's inclusion of both deverbal and deadjectival verbs (e.g., E. *dehumanize, demilitarize*; G. *entmenschlichen, entmilitarisieren*) among 'reversative' verbs (see Marchand 1971). Although he states that, at the level of morphological surface structure, these verbs are conceived of as prefixations of the respective deadjectival (non-reversative) verbs (e.g., E. *militarize* and G. *militarisieren*), Marchand's major point is (quite plausibly, I think) that they are, at some 'deep-structure' level, directly derived from the respective adjectives (cf. Marchand 1971:1.3.1.). This distinction of levels seems to justify his notion of 'deadjectival reversative verbs', which nevertheless is a contradiction in terms. After what has been said above (see 2.1.), reversative verbs are by definition deverbal verbs; the state denoted by the adjective cannot be 'reversed' but only negatived. Even in Marchand's own words, these verbs are "analysable either on a denominal basis as privative verbs or on a deverbal basis, thus expressing the reversal of what is indicated by the unprefixed verb, i.e. 'undo the action of militarizing'" (Marchand 1969:153). In other words, only if analysed as deverbal verbs they can be properly termed 'reversative' whereas they are '(abstract-) privative' if analysed as deadjectival verbs.

This distinction also receives some support from the material itself. There are clearly some verbs (e.g. *demobilize, declassify*) which can only be analysed as deverbal verbs of the reversative pattern (meaning 'cause to be no longer V-ed') and, on the other hand, there are verbs for which this way of analysis would be highly implausible since their unprefixed verbal counterparts are either unusual (or more recent) or do not match the prefixed verb semantically (e.g. *deethicize, depersonalize, demythicize, devitalize*). While in those latter cases an interpretation on a deadjectival basis is clearly preferable (meaning 'cause ... to be no longer A', i.e. 'deprive ... of the quality of being A'), both ways are quite plausible with the bulk of the material. I should prefer to consider these verbs as essentially 'doubly motivated' (e.g., *demilitarize* 'cause to be no longer military' and at the same time 'undo the result of militarizing') rather than distinguish between deep and surface structure levels of analysis here. If they are (as most of them seem to be) more likely to be construed as derived directly from adjectives, this can well be represented in terms of morphological (surface) structure, by assuming a discontinuous constituent (circumfix) as the determinatum (e.g., $de\text{-}+militar(y)_{\mathrm{A}}+\text{-}ize_{\mathrm{V}}$), similar to

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which can be opposed not only to formations in *zu-* or *zusammen-* but also (in certain contexts) directly to the unprefixed verb (cf. Kühnhold/Wellmann 1973:344, e.g., *einen Brief falten* vs. *auffalten*, *einen Schlips binden* vs. *aufbinden*, etc.). As a rule, these verbs do not have a substantival base. With desubstantival verbs the usual patterns are either ornative/privative (e.g. *verkorken/entkorken*) or correlative pre-particle formations (e.g. *zukorken/aufkorken*).

what has been proposed for desubstantival (concrete-)privative verbs of the type *decarbonize* (cf. Hansen 1980:17). Thus it becomes unnecessary to assume morphological restructuring (in terms of deverbal prefixation) at the surface level, although the deverbal way is not excluded as a possible interpretation.

2.4. For Marchand, the major key to the distinction between 'reversative' verbs on the one hand and 'privative' and 'ablative' verbs on the other seems to be the presence or absence of "a possible preaction" (Marchand 1973:1.5.).[8] Although the postulate ("there is always...") is modified by "possible", it must be doubted that the existence of such a preaction can be a criterion for reversative verbs in any strict sense. To be sure, a paraphrasis of the type 'undo the result of V-ing' is a helpful device for interpreting the majority of reversative verbs (and their applications), but it simplifies matters and does not account for the entire range of the type. For example, there are initial states resulting usually from uncontrolled processes (e.g. *disinfect*, *disinfest*), and there are other verbs which do not suggest any 'marked' kind of initial state but rather denote a departure from 'normal' condition (e.g. *discompose*, *discontent*, *dishearten*, *disorientate*, *disquieten* [OED Suppl.]). A paraphrasis accounting for all these meanings would at least have to be of the clumsy type 'cause to be no longer in the state *that may be thought of as* resulting from V-ing'. (See also above, section 1.3.) I doubt that this can still be regarded as a transparent description of structural meaning.

On the other hand, the complementary statement that "no such preaction is thought of with privative desubstantival verbs" (Marchand 1973:1.5.) may be true by and large but, formulated as it is in such loose pragmatic terms, again does not hold in any strict sense (cf., e.g., *cork/uncork*, *stopper/unstopper a bottle*, *mask/unmask one's face*, etc.). One may perhaps resort to the notion of 'centre and periphery' to maintain that in the centre of reversative verbs is the undoing of the result of a previous action or process, while the centre of privative verbs is characterized by the removal of things irrespective of their previous provision, all the other phenomena being of a 'peripherical' nature. Yet the only strict criterion for the distinction between reversative and privative verbs seems to be the basis of derivation: if the state to be 'undone' is denoted directly (though sometimes incompletely) by the base constituent (usually an adjective or noun), then the meaning is privative (or ablative); if the state to be 'undone' has to be inferred from the meaning of the base (=a verb) as being virtually identical with the final state of the action denoted by that verb, then the meaning is reversative.

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[8] See also Kastovsky (1982a:270f.): "Reversative Verben setzen eine frühere Handlung voraus, die zu einem Zustand geführt hat, welcher nun rückgängig gemacht wird. Ablative und privative Verben implizieren keine vorausgegangene Handlung..." — I would prefer to stick to his earlier statement (Kastovsky 1973:273): "As with the ablative and privative verbs, nothing is said in [reversative verbs, W.P.F.] about how the original state of separation or connectedness has come about. The verbs only denote that this original state is caused to change into its opposite".

This brings us to the last issue to be discussed here, which is no less problematical.

3. *On the morphological status of reversative verbs*

3.1. In Marchand's theory (as developed in Marchand 1969:134-136 and elsewhere), "prefixal combinations are expansions which must meet the condition of analysability after the formula AB=B". Hence the prefix may appear "in three functional aspects: the prefix has adjectival force, ... adverbial force, ... prepositional force" (Marchand 1969:134), with the second of these being particularly applicable to deverbal verbs. At any rate, the prefix in these combinations represents the determinant (=A) of the determinant/determinatum relationship of the syntagma, functioning as a modifier. This can be easily applied, for instance, to verbs such as *misjudge* 'judge wrongly' or *rewrite* 'write again' where the activity denoted by the complex verb is essentially the same as that denoted by the base verb, plus some modification by an adverbial element. If this way of analysis were applied to reversative verbs, they would have to be interpreted as 'V in reverse', i.e., as if adverbially modified, which obviously corresponds to their morphological appearance but misses their actual meaning. "All these verbs of the 'bind' and 'tie' group are made to look like direct syntagmas of the pattern 'tie in reverse' as if *aufbinden* were the 'reverse' variant of *binden* whereas in reality *einen Knoten aufbinden* means 'open the knot'" (Marchand 1969 : 136) or, more generally, 'undo the result of the verbal action, cause the object of the verb to be no longer tied' (ibd.). Therefore, Marchand classifies reversative verbs (along with privative, ablative and some other types of verbs) as 'pseudo-prefixations' and assigns to them the status of zero derivatives (Marchand 1969:205; 1973:2.1.); they are analysable as 'cause to be/*un*-(=not)-*tied*', with the zero suffix (=determinatum) meaning 'cause to be, make' and the two overt elements (*un-tie*) combining to constitute the determinant of the syntagma, representing the negatived state ('not tied'). Their superficial appearance as prefixations, then, is the result of "a morphological tour de force" (1969:136) or a reinterpretation at the morphological level (cf. Kastovsky 1982a:213).

This way of analysing reversative verbs, it must be emphasized, is fairly conclusive within the framework of Marchand's word-formation theory — with its basic distinction between expansion and derivation, its determinant/determinatum relationship in terms of the formula AB=B, and its high rating of semantic criteria for morphological analysis. (All of these fundamental concepts, by the way, do not seem to have been originally designed for the analysis of verbal meanings, or of properties and relations in general, but rather for the analysis of nouns or the denotation of 'phenomena', where they appear to be much more easily applicable). However, even within Marchand's own theory, I think, there are certain points of inconsistency which may have some bearing on the analysis of reversative verbs. In the following paragraphs I shall briefly mention some of these points before I try to indicate a possible solution transgressing this framework.

3.2. Marchand's formula $AB = B$ has at least two interpretations, which are not always compatible with each other. Under one interpretation, a semantic/pragmatic one, it means that the thing denoted by AB is an element of the class of things denoted by B (cf. Marchand 1969:11, "a *steamboat* is basically a *boat*"). There can be no doubt that this interpretation in terms of pragmatic inclusion (or semantic hyponymy) is predominant in his assessment of the morphological status of reversative verbs (the action of *unfastening* is not an element of the class of *fastening* but something else). Under another interpretation, which is closer to what Marchand calls "the grammatical character of a syntagma" (1969:12), the same formula is taken to mean "that AB belongs to the same word class and lexical class to which B belongs" (1969:11), in other words, that it shares the same syntactic (and, largely, semantic) paradigm with B.

It seems that Marchand meant to stipulate both interpretations at the same time. It must be pointed out, however, that under the latter interpretation reversative verbs would have every chance to pass as genuine prefixations (both AB and B being either actional or processual verbs, in the case of *fasten/unfasten* sharing the semantic paradigm of 'cause something to be in a state of [+/— ...] with regard to fastening'). On the other hand, if the formula is taken to mean denotative inclusion, then not only reversative verbs but also all types of negative verbs and adjectives (the largest coherent field of prefixation!) would have to be termed as 'pseudo-prefixations', since they are exactly the class of syntagmas with a basic meaning of $AB \neq B$. (Even in the case of ordinary negative adjectives or verbs such as *uneven* 'not even', *disagree* 'not agree', etc., the function of the prefix is not really that of a modifier but rather an operator, the syntactic affiliation of *not* to the class of 'adverbs' being a rather loose classification, to say the least.) It is only under the paradigmatic interpretation of the formula $AB = B$ that any cases of AB being a co-hyponym of B can be assigned the status of prefixal expansions.

3.3. Marchand does not distinguish, in his semantic interpretation of reversative verbs, between the essential traits of the 'action' denoted (the causative and 'change-of-state' components) and the 'activity' implied (the 'DO-SOMETHING' component, see above, 1.2.). Only if the action is identified with the particular activity (i.e., under an extremely pragmatic point of view), it is true that reversative verbs do not mean 'V in reverse' (or the reversed action). They may well fit into this semantic pattern, however, if the causation of the change-of-state (by doing whatsoever) is given priority in the meaning of the verb. To cite one of Marchand's favourite examples, if *aufknoten* means 'do something that causes x to be no longer fastened/closed by knots', then it really denotes the reversal of *verknoten/zuknoten* 'do something that causes x to be fastened/closed by knots'. The same applies mutatis mutandis to all other reversative verbs.

3.4. One of the most reasonable principles, to my mind, for limiting the application of the concept of zero derivation in general, and preventing it from uncontrolled proliferation, is the principle of parallelism. This means to say that assuming derivation by a zero morpheme can be justified where zero fills a slot that is otherwise filled by an overt morpheme (as, e.g., in *de-louse-* ø as compared with *de-gas-ify*: prefix+N+suffix$_{\mathrm{V}}$).[9] This principle has been explicitly affirmed by Marchand: "We can speak of a zero-morpheme only when zero sometimes alternates with an overt sign in other cases" (1969:360). Such a condition, however, is not fulfilled in the present case. Although present-day English and German word-formation has overt morphemes with a meaning 'cause to become...' for the derivation of verbs from nouns and adjectives (e.g., *atomize*, *materialize*; cf. Kastovsky 1973:260; Lipka 1982:12), there is no such pattern for the derivation of verbs from verbs. Whatever the most adequate interpretation of, say, the double-faced 'Move and Change class' in English might be (cf. Lipka 1982 : 13; e.g., *fly* 'move through the air' vs. 'cause to move through the air', *roll*, *walk*, etc.), it will be highly implausible to seek it in the area of word-formation. The same applies to other verbs where the change of syntactic paradigm (or case frame) is connected with a change of semantic type; cf., e.g., statal *hang*, *sit* (*down*), *stand* (intr.) vs. actional *hang*, *sit* (*down*), *stand* (tr., intr.), or actional *connect*, *link* (tr.) 'join' vs. statal *connect*, *link* (intr.) 'be joined', etc. There may be an issue of assuming either homonymy or polysemy with these verbs, and in the latter case, a more or less regular metonymic relationship between causative and non-causative verbal meanings might be established for the English lexicon (cf. Hansen et al. 1982 : 206f.). But there is no overt causative morpheme in English to be applied to any kind of verb (cf. ib. 140). Thus there would be no morphological analogue for the assumption of a zero morpheme in the structure of reversative verbs.

In Marchand's analysis of *untie* as "*un*-(=not)-*tied*/ ø ('cause to be, make')" the verbal base constituent (that is, in his analysis, the second part of the determinant) stands for the statal quality of being 'tied', which is not really the meaning of the verb but that of its participle. This sort of metonymic representation might seem quite tolerable in an interpretation which is smooth in every other respect. But here it rather looks like a descriptive trick, presenting some additional difficulty. 'Tied' as compared to the meaning of *tie* has essentially two facets: as an independent unit (semantic representation of the participle) it is 'more' than the verb since it means the 'result of V-ing'; as a semantic component of the meaning of the verb, however, it is 'less' than the verb itself, specifying the state that is said to be brought about in the meaning of the verb. Marchand obviously uses it in the former sense, which entails an interpretation of the reversative verb in terms of a "double causative" (Kastovsky 1973:269); if paraphrased in full, this means (for *untie*) 'cause to be no longer in the state resulting from causing to be fastened by ropes, etc'., which appears to be both unnatural and unnecessary. If 'tied' were understood in the latter sense, i.e., as the statal component in the meaning of *tie*, then the verbal base constituent of *un-tie* could still be taken to represent, additionally, the rest of the verbal components: 'cause to be...'; no zero suffix, then, would have to be charged with that load in a deverbal derivative.

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[9] For further examples of parallelism and a good general survey see Hansen et al. 1982:124, 128-134.

3.5. In order to overcome these deficiencies in Marchand's interpretation of reversative verbs, it might be necessary to drop the principle of absolute parallelism between the morphological structure of a syntagma and its semantic description with regard to the determinant/determinatum relationship. At least as far as verbs are concerned, there are quite a number of cases where the parallelism between the immediate constituents of the syntagma on the one hand and closed (continuous) sets of semantic components on the other is doubtful. Even in the case of prefixal combinations of a fairly clear 'adverbial' nature such as *misshape, misinterpret, misjudge*, etc., it can be argued that it is primarily the resulting state rather than the action as a whole ('cause to become...') that appears to be modified by an element 'wrongly, improperly'. When the prefix, however, represents an operator (such as 'not') instead of a modifier, it should be generally conceded that the set of components represented by the determinatum of a complex verb may be discontinuous. In other words, I would propose to ascribe to deverbal reversative verbs a truly deverbal morphological status, with the verbal base (determinatum) representing both the chain of higher-predicate components such as 'cause to become...' and the underlying state, and the prefix (determinant) representing an operator that comes in at some lower level of predication; i.e., it operates not over the whole chain of components but only the statal property components. According to this analysis, the verbal constituents of verbs such as E. *disappear, unfasten*, G. *entmischen*, etc., within the syntagma still represent what they stand for as independent lexemes: 'become (...) visible', 'cause to become (...) fixed', and 'cause to become (...) mixed', respectively. The open slots may be deleted for the unprefixed lexemes and filled up by the negator ('not') for the prefixed verbs, or otherwise, the slots may be taken to mean a positive direction, indicating movement towards the existence of the respective state (— → +), which is reversed (— ← +) in the case of prefixal combination. The formula AB=B can be fully applied to this analysis if it is understood in its broader, paradigmatic sense.

This kind of analysis may finally lead us to a better understanding of the semantic power of reversative prefixes in English word-formation (German does not offer a full-scale morphological equivalent here). These prefixes (viz. *de-*, *dis-*, *un-*) clearly share the idea of negativity with the rest of the negative prefixes (notably, with *non-*). The entire held of broadly negative operators in English word-formation, however, can be divided into two groups: one denoting 'negation proper' and the other denoting what may be called 'marked opposition'. If applied to a verbal base (as the determinatum), a morpheme of 'negation proper' (as the determinant) will necessarily come in as a negator at the highest possible level (in terms of logical components), or as a negative higher predicate, thus negating the verbal meaning as a whole, irrespective of its complexity (examples are rare in English, but cf. earlier nonce-formations such as *non-accord*, *non-answer*, *non-consent* [OED]; or more recent ones such as non cooperate).[10] A morpheme of 'marked opposition', on the other hand, can be used with a similar effect only in non-dynamic (i.e. statal) verbs, containing no higher components beyond the description of a state (cf. *disagree* 'not agree', *disbelieve* 'not believe', etc.). Even then, their function may be described as 'trans-negative', since they are capable of producing gradable complementaries (cf. *strongly disbelieve*, etc.).[11] Furthermore their 'trans-negative' function will result in producing a contrary opposite wherever the semantic type of the verbal base lends itself to contrary opposition (cf. *disfavour*, *dislike*, *disrelish*, etc., as well as adjectives prefixed by *in-* and *un-*). Finally, their 'trans-negative' power will make them cling, as negators, to the underlying state when they are combined with verbs of a processual or actional nature, which results in reversative meaning.

In a way, the semantic effect of 'marked opposition' gradually deviates from 'negation proper' with the increasing semantic complexity of the base. This may be illustrated by the tabular survey given below (which, however, suffers from the almost total lack of word-formation on the part of 'negation proper' with verbs; but compare adjectives prefixed by *non-*). In this table, the types *disappear* and *disarrange*, though only weakly productive (see note 1), stand for reversative verbs in general. They are fully synonymous (regarding their 'word-formation meaning') with the stronger types *de-escalate*$_{\text{intr}}$, *unfold*$_{\text{intr}}$ (processual) and *demagnetize*$_{\text{tr}}$, *unlock* (actional), respectively. It is, however, only in the light of the polysemous model '*dis-* + V' and its disambiguation mechanism that the full range of meanings of a 'trans-negative' prefix (and the way it "works") can be demonstrated within the same morphological model.

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[10] To be explained as a back-formation derived from *non-cooperation* (OED Suppl.). — It must be pointed out that none of these verbs exemplifies a productive type of English word-formation. They are quoted here for the sole purpose of illustrating the difference in the semantic power of the prefixes.

[11] Some other aspects of 'marked opposition' as distinct from 'negation proper' can be found in Welte (1978:192-213), described as characteristics of "affixal negation" (*non-being* excluded).

	Negation proper	Marked opposition
State, i.e. [−DYNAMIC]:		
[−GRADABLE]	(*belong to* vs. *not belong to*)	—
[+GRADABLE −EMOTIVE]	*accord* vs. *non-accord*	*agree* vs. *disagree* (gradable complementary)
[+EMOTIVE]	(*favour* vs. *not favour*)	*favour* vs. *disfavour* (contrary opposite)
Process, i.e. [+DYNAMIC −CAUSATIVE]	(*appear* vs. *not appear*)	*appear* vs. *disappear* (processual reversative)
Action, i.e. [+CAUSATIVE]	*cooperate* vs. *non-cooperate*	*arrange* vs. *disarrange* (actional reversative)

To sum up, reversative prefixes may well have the status of determinants in reversative verbs, since they convey more than just 'negation proper'. Their operation, as negators, over an inner layer in the semantic structure of the determinatum is the regular outcome of 'marked opposition' applied to dynamic verbs. This status can appear as the result of a "morphological tour de force" only if the semantic hierarchy of components is expected to be mirrored in the morphological syntagma in a linear way, or if this hierarchy is rigidly transferred to the morphological plane in terms of determinant/determinatum relationship. However, as it is uneconomical (Kastovsky 1982:213) for the language to employ a verbalizer of verbs, it may be considered likewise uneconomical for morphological theory to postulate such a model.

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THE PROBLEM OF DIRECTIONALITY IN CONTRASTIVE STUDIES BASED ON COGNITIVE LINGUISTICS

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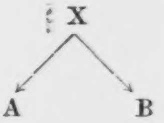
1

In contrastive studies of theoretical type in at least the last fifteen years it has been generally assumed that there exists a phenomenon of tertium comparationis which constitutes a common ground (possibly universal) for comparison of two or more languages. This is explicitly shown in Fisiak, Lipińska-Grzegorek and Zabrocki (1978:19), where it is claimed that

"... theoretical CS (contrastive studies) are language independent. They do not investigate how a given category present in language A is represented in language B". Instead they look for the realization of a universal category X in both A and B. This theoretical CS do not have a direction from A to B or vice versa but rather as in Fig. 1



This stance is quite justified when the language theory employed in comparison is transformational-generative grammar or similar theory. The idea is that there is an element which is an elment of some underlying, more rarely intermediate structure. The element X is abstract to the extent that it is a deep or underlying structure where A and B are attested L_1 and L_2 phenomena respectively.

Such an enterprise is consistently exploited in very many papers in *PSiCL* and other works in contrastive linguistics in Poland and other countries. In short TCS are adirectional in contrast to Applied CS which are unidirectional and are preoccupied with the problem of how a universal category X realized in L_1 as Y is rendered in L_2 (cf. Fisiak, et.al. 1978:10).

The problem of X is discussed extensively in various works of Krzeszowski (e.g. 1979, 1980) concerning input structure and various possibilities of conducting CS depending on the possible range of phenomena exhibiting various types of equivalence.

In this paper I am going to argue that such an enterprise, i.e. conducting TCS adirectionally, cannot be carried out if the theory employed in TCS is cognitive linguistics or more precisely prototype theory. This leads to a blurring of the well known and elaborated distinction of contrastive studies into theoretical and applied. This issue will be discussed later.

2

The justification of contrastive research in cognitive linguistics terms is given in Lewandowska-Tomaszczyk 1982, 1983, Krzeszowski 1983 and Kalisz 1981, and will not be discussed here. Contrastive studies employing prototype theory are not numerous. Elements of cognitive theory are present in contrastive papers by Boniewicz (1982), Kubiński (1982), Kalisz (1983) and in a longer work by Kalisz (1981). Theoretical papers incorporating cognitive linguistics in the overall language model with contrastive implications were written by Lewandowska-Tomaszczyk (1982, 1983). The most significant paper concerning prototype theory and theory of contrastive studies was written by Krzeszowski (1983) where apart from theoretical considerations a fairly detailed analysis of the English *over* and its Polish equivalents and (*po*)-*nad* in Polish and its English equivalents is given.

We will discuss briefly the already existing works within the framework of prototype theory form the point of view of the directionality problem in TC.

3

Boniewicz (1982) discusses prototypical properties of raised constructions in English and Polish. Her prototype is devised in such a way that the nine properties which are formulated are so general that they embrace raised constructions both in English and Polish. Boniewicz's (1982:98) property IX illustrates best what we have in mind:

"IX. The time reference of the main predicate is either posterior or simultaneous with respect to the complement clause".

She writes further, presenting evidence to the effect that the time reference of the main predicate in Polish constructions is simultaneous with respect to the complement clause, whereas in English it may be both simultaneous and posterior.

At least two theoretical possibilities concerning the status of the prototype as given in Boniewicz (1982) emerge. Firstly, the properties are general enough to embrace different phenomena in two languages under consideration. This possibility seems to be favored in Boniewicz 1982. Secondly, property IX may be treated as a property of English raised constructions which allows both posteriority and simultaneity where Polish constructions family resemble or partially match that property since Polish constructions do not allow posteriority of time reference with respect to main predicate as in 1P.

1.E. She seems to have sold the car.
P. *Ona wydaje się już sprzedać samochód.

Boniewicz (1982) does not consider the phenomenon of family resemblance throughout her paper, thus her prototype has a different status from Lakoff's (1977, 1981, 1982) constituting a set which is common for two languages under consideration, making the contrastive study adirectional.

The second possibility, mentioned above, of treating Boniewicz's (1982) prototype employing the notion of family resemblance makes the analysis no longer adirectional. English in that case is the prototype source where Polish constructions will be confronted with English on the basis of the principle of family resemblance.

Being still more consistent with prototype theory as formulated in Rosch 1973, 1977 and the principle of family resemblance as given in Wittgenstein 1953, and Lakoff 1977, 1981, Boniewicz's property nine should be reformulated to the effect that only one of two cases i.e. either simultaneity or posteriority of time reference of the main predicate with respect to the complement clause will be prototypical. Simultaneity seems to be a more common phenomenon in English raised constructions (although a detailed analysis including perception of the constructions and statistics confirming the claim is needed) where posteriority of the time reference in English would be a construction family resembling the prototypical raised constructions being, obviously, very close to the prototype.

Prototype and family resemblance are inherently contrastive phenomena even at the level of one language. Curiously enough, if only simultaneity is taken to be prototypical in English, no difference at the prototypical level between English and Polish will be noted as far as property nine is concerned. A point that linguistic forms have more or less prototypical equivalents in other languages was made in Krzeszowski (1983:9) and will be discussed later.

4

My analysis of the English sentences with indicative *that* complements (SITC) and the Polish sentences with *że* complements (Kalisz 1981) is clearly unidirectional. Only English SITC are positively marked with respect to all syntactic, semantic and pragmatic properties as devised for a prototype of sentences with complement constructions. All other sentences with complement constructions and sentences with attitudinal sentence adverbs both in English and Polish are analyzed as partially matching to a greater or lesser extent the prototype i.e. SITC. A reverse step, equally legitimate, or rather a continuation of the analysis could be taken, namely starting from Polish sentences with *że* complements and treating them as prototypical sentences with complement constructions where English SITC and other constructions would partially match the prototype established on the basis of the analysis of the Polish constructions. Another possibility is to take only those properties which do match and form a prototype out of them, but then it would not be a prototype in a cognitive linguistics sense because it would not represent a satisfactory set neither for L1 nor for L2 consequently making the principle of partial pattern matching or family resemblance spurious. Such a set would be useful in establishing a core grammar which does not seem to have much to do with prototype theory and family resemblance (cf. Krzeszowski 1983).

5

Kubiński's (1982) paper on Polish *się* constructions and their English equivalents includes a proposal of a continuum for the analysis of the English constructions containing two extremes which are prototypical points where one scale point represents a prototypical active voice construction where subject=agent and direct object=patient. The other end of the scale represents a prototypical passive construction where patient=subject and agent=chômeur.

Various nonprototypical constructions like 2—4 where the primary responsibility for the action or state of affairs (the most essential property for determining agenthood, cf. Lakoff 1977) in a sentence is attributed to a patient, would drift toward either end of the scale depending on which end-of-scale construction they resemble more.

2. These dresses sell well.
3. Sheila seduces easily.
4. This car practically drives itself.

Polish sentences according to Kubiński are assessable on a scale which has three focal points, i.e. the end of scale points being the same as for English plus reflexive or middle voice located in the middle of the scale as in 5P. where subject=agent and patient.

5.P. Janek myje się.
E. E. John is washing himself.

Polish sentences will thus be located on the scale family resembling one of the three basic, hence prototypical constructions. In Kubiński's analysis we have two different prototypical situations in English and Polish. The greater range of the existence of Polish reflexive (including pseudoreflexives) constructions than in English seems to motivate Kubiński's analysis, positing the third mid focal point. However the analysis itself, i.e. considering reflexive voice where subject of a sentence is both agent and patient, seems to be available for English, too.

Disregarding the problem of the adequacy of the analysis which is not the main issue of the present paper. Kubiński's (1982) analysis, unlike Boniewicz's (1982) account contains partial pattern matching; however partial pattern matching in Kubiński 1982 seems to be applicable within one language only, and it does not seem to be a contrastive tool. Kubiński's continuum cannot constitute an X which is rendered as some a in L1 since continua for English and Polish are different and separate.

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A conclusion which may be drawn so far is that whenever a given analysis makes use of partial pattern matching or family resemblance principles, the analysis cannot contain an abstract X which is capable of serving as a common input or common ground for both L1 and L2. It may be claimed that prototypes are largely if not exclusively language and culture specific and as is known are relativized to particular idealized Cognitive Models. A short note on the comparison of prototype and metaphors connected with expressing anger in American English and Polish may serve as a case supporting the above Lakoff and Kövecses (1984:20-21) formulate a prototype scenario for a cognitive model of anger in American English where stage 1 is

"an offending event which displeases S where there is a wrong-doer who intentionally does something directly to S. The wrongdoer is at fault and S is innocent. The offending event constitutes an injustice and produces anger in S..."

Even in nonprototypical cases Lakoff and Kövecses do not seem to consider the possibility of getting angry at things or situations and not at people. They only mention an indirect cause as the fifteenth nonprototypical case, which may suggest that it is quite remote from prototypical cases. This indirect cause is where the offence is not the immediate cause of anger but rather the cause of the immediate cause. The example which Lakoff and Kövecses (1984:27) give for an indirect cause is the following:

„...... Your secretary forgets to fill out the form that results in your not getting a deserved promotion... You are angry *about* not getting a promotion. You are angry *at* the secretary *for* not filling the form".

Thus the possibility that the state of affairs or stubbornness of things for which you cannot blame anybody in particular, may constitute a direct cause of anger is not considered for American English. Consider the following

6. Cholera, znowu wysiadła żarówka!
   Gdzie ja do diabła, dostanę teraz żarówkę! (overheard)
   Dammit, the bulb blew out again!
   Where the hell will I get another one!
7. Już dwudziesty raz próbuję to zapiąć!
   It's for the twentieth time, I've tried to zip that!

Cases like 6 and 7 are very frequent in Polish and they show that either there is quite a substantial difference between English and Polish models of anger where 6 and 7 would be very closely resembling the prototypical model of anger in Polish if not being prototypical or Lakoff and Kövecses (1984) model of anger is not too adequate for American English (i.e. Americans do get angry *at* things not only *about* things).

The statement that prototypes are culture specific does not mean that the prototype analysis accompanied by family resemblance principle is a poor contrastive tool. On the contrary, any analysis in such terms is inherently contrastive even within one language. Abandoning adirectionality in theoretical contrastive studies, fruitful research could be conducted starting from L1 establishing a prototype and family resembling constructions, passing to L2 analyzing corresponding constructions on the basis of family resemblance with respect to a prototype established for L1 and family resembling constructions in L1. Then, if needed, for an exhaustive analysis, one can start from L2 establishing a prototype and family resembling constructions in L2 and pass on to the analysis of matching constructions from L1 with respect to a prototype and family resembling constructions established for L2. Finally it may be shown which properties are shared by the two prototypes.

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Such a step as formulated above is taken by Krzeszowski (1983) in his analysis of polite requests to leave the boat. In his analysis of *over* and its Polish equivalents, Krzeszowski starts with Brugman's (1981) analysis of *over* which includes prototypical and family resembling uses of *over*. Then he tries to establish the best matching Polish equivalents which he calls prototypical equivalents. Krzeszowski's (1983) notion of a prototypical equivalent is attractive and useful, however the statement that linguistic forms have more or less prototypical equivalents in other languages needs an amendment. Krzeszowski notes later in his paper that 8.

8. He jumped over the cliff.

can be adequately rendered in Polish only descriptively periphrastically as in 9.

9. Skoczył w dół przez krawędź urwiska.

It is even intuitively felt that the equivalence holding between 10E and 10P differs in character from the equivalence holding between 8 and 9.

10. E. The plane flew over the hill.
    P. Samolot przeleciał nad wzgórzem.

This difference I would like to attribute to the lack of a prototypical equivalent in the latter case. 9 is not a commonly attested concept and hence, form in Polish. Thus the mere possibility of establishing an equivalent construction does not guarantee that it would have a prototypical status. Obviously, numerous examples exist where no prototypical equivalent can be found. Consider 11E and 12P a, b, c, and d.

11. E. Are you pulling my leg?
12. P. a) Żartujesz?
    b) Kpisz sobie (ze mnie)?
    c) Drwisz sobie ze mnie?
    d) Kpisz czy o drogę pytasz?
12.E. Are you kidding?

None of 12P seem to be a prototypical equivalent of 11E, however the conveyed meaning seems to be very similar. 12P cases are prototypical or close to prototypical equivalents of 12E.

The reformulated notion of prototypical equivalence may be given as follows: linguistic phenomena have more or less prototypical equivalents in other languages only when for a phenomenon in L1 there exists a commonly attested phenomenon in L2 matching to a high degree the prototypical properties established for the phenomenon in L1. The most prototypical equivalent of an L1 phenomenon in L2 matches the properties of the prototype in L1 to the highest degree out of all possible phenomena in L2.

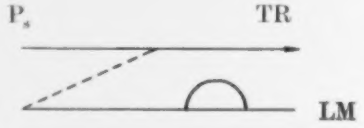
Similarities and differences between or among languages can be studied with respect to the availability or lack of prototypical equivalents in the languages under consideration. Thus important typological generalizations may be arrived at by applying this principle. Obviously, the notion of prototypical equivalence should be elaborated further. I believe that it is connected with naturalness and frequency of occurrence of the purported prototypical equivalents.

Having established the prototypical equivalent of the English basic senses of *over* in Polish which is *(po)nad*, Krzeszowski proceeds to the analysis of *(po)nad* forming a chaining scheme which is different in many respects from

Brugman's (1982) chaining scheme for *over*. Later he passes on to the analysis of particular senses of *(po)nad* and states that a complete analysis of the problem should take into account each sense with the prospect of finding its prototypical and less prototypical equivalents in the other language. Concluding, it may be said that Krzeszowski's analysis is unidirectional in the sense described in the previous section.

Still, Krzeszowski's analysis contains something which at first glance looks like X discussed in section 1.

13.



where TR (trajector) is either stationary or moving but at a certain time its fragments or its complete body finds itself in the position indicated with relation to LM (landmark). 13, according to Krzeszowski, is a gestalt against which most prototypical senses of *over* and *(po)nad* are centered and that apart from the above gestalt there are other gestalts which serve as centers for other senses of *over* and of *(po)nad* which attract other equivalents. It can easily be noted that 13 is not an X because first of all it is not an abstract logical or universal language expression but a representation of a physical image. Secondly, it is not an input to any analysis; it is rather a result of the analysis, i.e. bringing together the most relevant properties which attract the most prototypical usage of *over* and *(po)nad*. Thus, it is a construct of a totally different kind than X in section 1.

I would like to claim that coming up with a generalization concerning contrasted languages at the end of the analytic procedure is nothing different from what we have been doing in practice since the establishing of the Polish-English Contrastive Project. It is the status that we were attributing to the generalization, i.e. X, which was different in transformational generative or similar studies. Contrastive research in cognitive linguistics terms demystifies the procedure and reflects in a better way the particular steps of the analysis. This way certain problems disappear, cf. the pains taken by Fisiak, Lipińska-Grzegorek and Zabrocki (1978:31-36, 67-69 and other) to find a common notion for direct object and other objects in English and Polish.

8

A note concerning relation between theoretical and applied contrastive studies is necessary. Conducting contrastive studies unidirectionally in both theoretical and applied studies does not make the distinction invalid. An account of similarities and differences in compared languages for purely descriptive reasons should remain as an interesting and valid enterprise. An applied contrastive linguist would be able to profit more from findings of a theoretical linguist working with prototypes and the family resemblance principle since it seems to be easier to use the results of such theoretical contrastive work for preparation of teaching materials and other goals. The translation seems to be more direct since TCS would not be characterized by adirectionality and would not contain an extremely complex formal apparatus which is often unreadable for an applied linguist. The above statements are to be taken as very tentative since contrastive research in terms of cognitive linguistics, as cognitive linguistics itself, is in a very early stage of development.

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TOWARDS CONTRASTIVE MORPHOLOGY: THE COMPARATIVE DEGREE OF POLISH AND ENGLISH ADJECTIVES

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1. INTRODUCTION

1.1. The purpose of the present paper is twofold. First, we set out to describe selected morphological aspects of the comparison of Polish and English adjectives i.e. account for the morphological structure of complex word-forms containing morphological or lexical exponents of the grammatical category of comparative degree. An attempt is made to find out to what extent form and meaning of the relevant word-forms are regular i.e. accountable in terms of general statements (rules). It will turn out that the two languages under consideration exhibit substantial differences in this respect. The description is couched within the recently proposed framework of Categorial Lexical Model of word formation (Beard (1977), Laskowski (1981), Szymanek (1981)).

Our second aim is to consider some general consequences that our analysis entails for contrastive morphology. We argue that two crucial notions of theoretical generative morphology prove useful for contrastive morphology:
— the notion of rule productivity
— the distinction between Derivational and Affixational Rules.
Since Categorial Lexical Model is the only framework in which the latter distinction is drawn explicitly we will tentatively conclude that Categorial Lexical Model better serves the aims of contrastive morphology than the classic and most widely accepted framework of generative morphology expounded in Aronoff (1976).

1.2. It is a well recognized fact in traditional Slavic Linguistics that word-formation affixes display a two way overlap between form and meaning.

On the one hand affixes exhibit a wide range of meanings (e.g. [+k]: diminutive in *głów+k+a* 'little head' and feminine in *aktor+k+a* 'actress') and on the other hand some word formation categories may be expressed by a number of formally distinct affixes (diminutives: *kwiat+ek* 'flower', *fiac+ik* 'fiat'). This insight has been incorporated into the Categorial Lexical Model in the form of a distinction drawn between Rules of Derivation and Rules of Affixation. Rules of Derivation specify the network of semantic and syntactic relations that hold between complex lexical items in a given language and are encoded by derivational means. Each Rule of Derivation implies the existence of at least one (in most cases more than one) Rule of Affixation which specifies the phonological shape and the distribution of various exponents of these semantic relations. The attachment of a given affix to a given class of derivational bases is in most cases governed by a complex interplay of phonological, morphological, semantic and lexical factors that are encoded in the grammar as conditions on Rules of Affixation (cf. Booij (1977) and Szymanek (1981) for a detailed study of a number of Rules of Affixation and conditions on them).

1.3. The primary aim of contrastive morphology could be defined as the study of how certain cross-linguistic grammatico-semantic categories are realized by morphological means in the languages under consideration. This view is implicit in a number of cross-linguistic investigations of derivational phenomena (Dressler (1980) and references quoted therein). One should note that any contrastive analysis along these lines presupposes the existence of a well-defined set of semantico-grammatical categories such as those employed in traditional descriptions of derivational morphology (Nomina Agentis, Nomina Actionis, Nomina Loci, etc. cf. Grzegorczykowa and Puzynina (1979)). Categorial Lexical Model is the only model of generative morphology in which such semantic categories are encoded in grammar in the shape of Rules of Derivation.

1.4. The most widely accepted model of generative morphology is that of Aronoff (1976). As pointed out in Szymanek (1985) Aronoff's theory hinges crucially on the 'one affix — one rule' principle (Aronoff, 1976:89 ff) which coupled with the Unitary Base Hypothesis (Aronoff, 1976:47) predicts that there is a one-to-one correspondence between morphological rules and the formally distinct affixes identifiable in a given language. This assumption (implicit in other generative models of morphology cf. Halle (1973), Allen (1978), Lieber (1980), Selkirk (1982)) is incompatible with the primary aim of contrastive morphology as defined in 1.3.:

(a) Morphological description couched in terms of Aronoff's theory does not show how a given cross-linguistic semantic category is realized by various morphological exponents in different languages. It is due to the fact that in

Aronoff's framework there are no means of expressing the semantic identity of formally distinct affixes. As Szymanek points out: "... by strictly adhering to Aronoff's 'one affix — one rule' principle one is unable to express the fact that the suffixes +*ation* and +*ment* are related to each other semantically..." (Szymanek, 1985:5).

(b) As a result Aronoff's framework fails to provide the basis of comparison, an indispensable foundation of a contrastive linguistic analysis.

It stands to reason that cross-linguistic similarities between morphological rules could only be encoded in a linguistic description when semantic considerations are called into play. In so far as the classic Saussurian principle of the arbitrariness of linguistic sign (de Saussure (1916)) is valid there seems to be nothing in the formal aspect of morphological processes which would indicate their semantic identity. Thus given the complete sets of Aronovian morphological rules for two languages under comparison (L1 and L2) there is no way in which any of the morphological rules in L1 could be compared to any morphological rule in L2. On the other hand, within the Categorial Lexical Model morphological rules of L1 could be compared with their functional (semantically equivalent) counterparts in L2 in a straightforward manner, since in this framework semantically related Rules of Affixation are grouped under one heading of a Rule of Derivation. Rules of Derivation, in turn, encode grammaticosemantic categories realized in derivational morphology of various languages.

2. THE COMPARATIVE DEGREE OF ENGLISH ADJECTIVES

Within the Categorial Lexical Model the production of the English word forms containing lexical or morphological exponents of the category of comparative degree is effected by two Rules of Affixation of the following shape:

(1) $[\mathrm{Y}]_{\mathrm{CD}} - - \rightarrow [\mathrm{X}]_{\mathrm{ADJ.G.}} + //\mathrm{Vr}//$
(2) $[\mathrm{Y}]_{\mathrm{CD}} - - \rightarrow //\text{mɔ : r}// \; \# \; \# \; [\mathrm{X}]_{\mathrm{ADJ.G.}}$

where:

$[\mathrm{Y}]_{\mathrm{CD}}$ — word forms containing exponents of the comparative degree
$[\mathrm{X}]_{\mathrm{ADJ.G.}}$ — gradable adjectives
// // — underlying representation
V — unspecified vowel
# — word boundary
+ — morpheme boundary

Our present task is to establish the range of application and the productivity of the above Rules of Affixation. In other words we will approach the so far unresolved problem which English adjectives form the comparative degree periphrastically and which inflectionally. From the traditional analyses of this issue (e.g. Quirk et al. 1972) the following conclusions can be drawn:

— uni-syllabic adjectives form the synthetic degree
e.g. *sad* : *sadder*
— tri-and more syllabic adjectives form the analytic degree
e.g. *contemporary* : *more contemporary*
intelligent : *more intelligent*
e.g. *beautiful* : *more beautiful*

The most problematic is the group of disyllabic adjectives. English disyllabic adjectives can be stressed either on the first or on the second syllable. In the latter case they form synthetic degree (Jespersen (1949)) e.g. *polite — politer*. This allows us to subsume unisyllabic and disyllabic adjectives stressed on the second syllable under one generalization:

(3) Adjectives that end in the stressed syllable form the category of degree synthetically.

One should note that (3) does not account for a numerous group of disyllabic adjectives which take morphological endings of degree and are stressed on the first syllable. We can classify these adjectives according to their stem endings:

(4) A. [ɪ] — funny, noisy, wealthy, friendly, happy, etc.
B. [l̩] — gentle, feable, simple, noble, etc.
C. [ər] — clever, bitter, etc.
[əw] — hollow, shallow, narrow, etc.

In what follows an attempt will be made to prove that all these adjectives are unisyllabic at the underlying level and as such could be subsumed under (3). The final syllabic segment is in all these words introduced in the course of phonological derivation via the operation of an independently motivated phonological rule. We will need two such rules: Sonorant Syllabification and Schwa Insertion to account for words in 4 (A, B) and (4 (C), respectively. Chomsky and Halle set up the rule of Sonorant Syllabification (1968:85):

(5) $[+\text{son}] \dashrightarrow [+\text{syll}] \,/\, C\_\_\ \#$

to account for the alternations between syllabic and nonsyllabic sonorants in words such as: *schism* : *schismatic*, *hinder* : *hindrance*, *burgle* : *burglary*. Rubach revised the above rule restricting the left-hand side context to [+obstruent] in order to prevent it from the application to words such as *film* (Rubach (1977)). Now we have:

(6) $[+\text{son}] \dashrightarrow [+\text{syll}] \,/\, [+\text{obstruent}]\_\_\ \#$

The underlying representation of adjectives in (4 B) looks now as follows: //fVbl//. If we assume that the rule of Stress Assignment precedes Sonorant Syllabification in the phonological derivation then all adjectives in (4 B) are subject to the Rule of Affixation (1). The derivation of *simple* and *simpler* proceeds as follows:

(7) UR	//sinpl # //	//sinpl # //
Stress Assignment	′sinpl #	′sinpl #
Rule of Affixation (1)	—	′sinpl + Vr #
Sonorant Syllabification (6)	′sinpl̩ #	—
Nasal Assimilation	′simpl̩ #	′simpl + Vr #

Note, that the comparative degree morpheme [+Vr] must carry a morpheme boundary [+] to prevent the application of (6) to structures such as: ′simpl +Vr #.

Adjectives listed in (4). A have the following underlying representation: //funj # // and thus can be subsumed under generalization (3) after the application of Stress Assignment. The final surface [i] is in all these words derived from the underlying //j// via the rule of Sonorant Syllabification.

The most problematic group of disyllabic adjectives is (4) C. where the final unstressed syllable has the following structure:

(8) $[\text{ə}] \left\{\begin{matrix} \text{w} \\ \text{r} \end{matrix}\right\}$

If these words are to be unisyllabic at the underlying level then the [ə] segment must be introduced by a phonological rule. We can tentatively state this rule as follows:

(9) Schwa Insertion (informal)

$$\text{ø} \dashrightarrow [\text{ə}] \,/\, \text{C}\_\_ \left\{\begin{matrix} \text{r} \\ \text{w} \end{matrix}\right\}$$

The derivation of *clever* and *cleverer* proceeds now as follows:

(10) UR	//klevr # //	//klevr # //
Stress Assignment	′klevr #	′klevr #
Affixation Rule (1)	—	′klevr # Vr #
Schwa Insertion (9)	′klevər #	′klevər # Vr #

Summing up: the English adjectives containing lexical or morphological exponents of the comparative degree are not listed in the Lexicon but generated by productive Rules of Affixation. These rules either attach a morpheme of degree to an adjectival stem or precede an adjectival stem with the lexical exponent of degree. We claim that the rule of synthetic degree formation (Affixation Rule 1) operates only on the following structure: $\left[\_\_\begin{bmatrix}+\text{stress}\\+\text{syll}\end{bmatrix}C_0\#\right]$ ADJ.G. The stems of gradable adjectives that do not fulfil this structural condition take the lexical exponent of degree.

3. THE COMPARATIVE DEGREE OF POLISH ADJECTIVES

The discussion of the relevant Polish data is an attempt to answer two questions:

(1) What is the distribution of morphological and lexical exponents of the category of the comparative degree?
(2) What are the underlying representations and the distribution of various allomorphs of the morphological exponent?

We will present evidence confirming the following hypotheses:

A. The production of complex word-forms containing lexical or morphological exponents of comparative degree is effected by two Rules of Affixation:

(13) $[\mathrm{Y}]_{\mathrm{CD}} - - \rightarrow [\mathrm{X}]_{\mathrm{ADJ.G.}} + //\check{\mathrm{s}}//$
(14) $[\mathrm{Y}]_{\mathrm{CD}} - - \rightarrow //\mathrm{bardz}+\mathrm{ej}// \# \# [\mathrm{X}]_{\mathrm{ADJ.G.}}$

(for symbols cf. p.5)

B. The Rule of Affixation (14) is fully productive.

C. The Rule of Affixation (13) as well as allomorphy rules accounting for the various shapes of the comparative degree morpheme ([+ejš] vs. [+š]) have the status of redundancy statements in the sense of Jackendoff (1975). In other words morphological marking of the comparative degree is lexically governed.

The evidence for the productivity of (14) and the lexical government of (13) is presented in section 3.1. Rules of Allomorphy are discussed in some detail in sections 3.2. and 3.3.

3.1. The productivity of Affixation Rule (14) is borne out by native speakers linguistic intuition:

— John H. Dick concludes his statistical research (Dick 1976) with the following statement: "If a native speaker of Polish hesitates which of the two possible forms of comparison to use he knows that *the periphrastic form is never incorrect*". (emphasis mine)

— Native speakers of Polish often make slips, in which both exponents of the category of degree appear:

e.g. *bardziej gęstszy
*bardziej znaczniejszy

The fact that a great number of such mistakes pass unnoticed can be explained if we assume that word-forms such as: *bardziej gęsty* and **bardziej gęstszy* tend to be synonymous. The meaning of *gęstszy* therefore seems to "gravitate" (Aronoff's term) towards the meaning of *gęsty*, i.e. *gęstszy* tends to be semantically non-transparent. Semantic transparency is correlated with productivity of the relevant morphological rules (Aronoff 1976) so the lack of semantic transparency of *gęstszy*, etc. indicates the loss of productivity of the Rule of Affixation (13).
— The number of analytic forms of degree seems to be steadily diminishing. Words such as: *prędszy* 'swifter', *gładszy* 'smoother', *miększy* 'softer 'judged as perfectly natural by older speakers are not used in the speech of younger generation.

The synthetic forms of degree must be listed in the Lexicon for at least two reasons:
— They are subject to further derivation. The following words are all derived from the comparative forms of adjectives:

wyższy	'higher'	*niższy*	'lower'
wyższość	'superiority'	*niższość*	'inferiority'
wywyższać się	'be haughty'		
podwyższać	'raise'		
podwyższenie	'rostrum'		
młodszy	'younger'	*starszy*	'older'
młodszak	'younger toddler'	*starszak*	'older toddler'

All adjectives in the comparative degree are subject to a very productive rule of word formation which reclassifies adjectives as nouns without an overt morphological marking e.g. *mały* 'small', *mały* 'small boy' as in: *Ten mały działa mi na nerwy.* 'that small boy is getting on my nerves', *grubszy* 'thicker', *grubszy* 'a thick boy' as in: *Grubszy nie pień mnie.* 'Don't bug me'.
— They exhibit idiosyncratic semantic features i.e. their meaning is not predictable from the meanings of the composite morphemes. The number of such examples is not very impressive but one should note: *starszy* 'superior in rank', *młodszy* 'inferior in rank'. Hypothesis C. (section 3) predicts that both the number of new derivatives from comparatives and the number of new idiosyncratic meanings of comparatives will steadily grow. Notice a large num-

ber of derivatives from suppletive forms of comparative degree which, of necessity, have always been listed e.g.:

zły 'bad'	*gorszy* 'worse' *pogorszyć* 'worsen'	*dobry* 'good'	*lepszy* 'better' *polepszyć* 'improve' *ulepszenie* 'improvement'

3.2. Even the most cursory analysis of the relevant data reveals that the comparative degree morpheme appears in two shapes:

— [ejš] as in *cieplejszy* 'warmer', *mądrzejszy* 'wiser'
— [š] as in *młodszy* 'younger', *grubszy* 'thicker'

In this section we shall discuss the phonological form and the distribution of these allomorphs in some detail. The same problem is examined in Laskowski (1973, 1981) where the following solution is offered:

— There are two allomorphs of the comparative degree morpheme: [š] and [ejš].

— Their distribution is as stated in Szober (1966):
[ejš] appears after consonantal clusters
[š] appears elsewhere.

This analysis seems to be incompatible with the data. First, the statement of the distribution of the [ejš] allomorph is false for two reasons:

i. There are consonantal clusters after which [š] and not [ejš] appears:
st : *gęstszy* 'denser', *soczystszy* 'mellower', *prostszy* 'simpler', *wyrazistszy* 'more conspicuous'
rd : *twardszy* 'harder'

ii. On the other hand, [ejš] appears regularly after consonantal clusters split by a high lax vowel at the underlying level:
sprytniejszy 'more shrewd' //sprit+in+ej+š+i//.

Second, the comparative degree morpheme must have at least three and not two allomorphs: //iš//, //š//, //ejš//. //*iš*// : //://š//. Some adjectival stems exhibit palatalization in the comparative form, other do not. As their behaviour in this respect is unpredictable it must be recorded at the underlying level.

ANTERIOR PALATALIZATION

ł : l	*wesoły* 'joyous'	: *weselszy* 'more joyous'		*krótki* 'short'	: *krótszy* 'shorter'
			vs.		
n : ŋ	*zielony* 'green'	: *zieleńszy* 'green comp.'		*stary* 'old'	: *starszy* 'older'

1-st VELAR PALATALIZATION

g : ż	*tęgi*	: *tęższy*	*cichy*	: *cichszy*
	'obese'	: 'obese comp.'	'silent'	'more silent'

We claim that [ej] is introduced by an allomorphy rule of EJ-Epenthesis, which can tentatively be formulated as follows:

$$(15)\quad \text{ø} \dashrightarrow \text{ejĭ} \,/\, C\begin{bmatrix}+\text{cons}\\ +\text{son}\end{bmatrix}\underline{\quad} + \check{s}$$

The ĭ segment after [ej] in (15) is necessary to prevent the phonological rule of J-Deletion from application to [ej]. An apparent exception to the [+son] restriction (Jerzy Rubach personal communication) on the second member of the consonantal cluster is the word *łatwy* 'easy' (comp. *łatwiejszy* 'easier'). Note, however, that at the underlying level this word has the following form: //watw+i//. It is a well recognized fact that at least some Polish surface [v] are derived from underlying //w//.

A large group of apparent counterexamples to (15) has already been mentioned: all adjectives in which the stem final consonantal cluster is split by an underlying high lax vowel (e.g. adjectives ending with a very productive suffix [+n] //ĭn// : *sprytny* 'shrewd', *sprawny* 'dexterous', *rezolutny* 'eloquent', etc.). Jerzy Rubach has pointed out to me, however, that Polish grammar contains an independently motivated allomorphy rule of the following shape:

$$(16)\quad \text{ĭn} \dashrightarrow \text{n} \,/\, \underline{\quad} C$$

Now the derivation of *sprytniejszy* 'more shrewd' and *mądrzejszy* 'wiser' proceeds as follows:

(17)

mądrzejszy 'wiser'	*sprytniejszy* 'shrewder'	
//mondr+š//	//sprit+ĭn+š//	UR after the Rule of Affixation (13)
—	sprit+n+š	Allomorphy (16)
mondr+ejĭ+š	sprit+n+ejĭ+š	Allomorphy (15)
mondr'+ejĭ+š	sprit+ŋ+ejĭ+š	Anterior Palat.
mondr'+ej+š	sprit+ŋ+ej+š	Yer Deletion
mondž+ej+š	—	r-Spell-out-rule

3.3. Another important rule of allomorphy in the relevant area of Polish morphology has the following shape:

$$(18)\quad \{+k\}\ \{+ok\}\ \{+ek\} \dashrightarrow \text{ø} \,/\, \underline{\quad}\{\check{s}\}\ \text{comp.}$$

One should notice that {+k} is deleted only if it is a separate morpheme, not a part of a morpheme (e.g. *dziki* 'wild', *dzikszy* 'wilder'). The following paradigmatic relations point to the suffixal nature of [+ek], [+ok], [+k]:

[+ek]			
dal+ɛc+i	'distant'	*dal*	'distance'
[+ok]			
gwɛmb+oc+i	'deep'	*gwembj+a*	'abyss'
šer+oc+i	'wide'	*po+šež+i+tç*	'widen'
vis+oc+i	'high'	*pod+viš+š+i+tç*	'raise'
[+k]			
bl'is+c+i	'close'	*bliž+ej*	'closer'
nis+c+i	'low'	*niž+ej*	'lower'
prent+c+i	'swift'	*prendz+ej*	'swifter'
gwat+c+i	'smooth'	*gwadʑ+i+tɕ*	'stroke'

Nykiel and Fidelholtz (1981) argue that [k] has the form //ik// at the underlying level on the strength of the following arguments:

i. The vowel in this suffix blocks the choice of the long form of the comparative morpheme [+ejš], which, Nykiel and Fidelholtz (1981) repeat after Szober (1966), appears when an adjectival stem ends in a consonantal cluster.

ii. Some stems exhibit palatalization before [+k]: *gorzki* 'bitter', *ważki* 'weighty'.

There are serious objections to both arguments. One important problem overlooked in Nykiel and Fidelholtz's analysis (1981) is the question of ordering of two rules of allomorphy: EJ-Epenthesis (15) and K-Deletion (18). Note, that if K-Deletion is ordered after EJ-Epenthesis then the underlying high lax vowel before [+k] is superfluous since the context for the application of EJ-Epenthesis is not met (this context is $C\begin{bmatrix}+\text{cons}\\+\text{son}\end{bmatrix}$ as demonstrated in 3.2. and not CC as assumed by Nykiel and Fidelholtz). If, on the other hand, K-Deletion is ordered before EJ-Epenthesis then the consonantal cluster disappears before EJ-Epenthesis could apply. The second argument adduced by Nykiel and Fidelholtz in favour of //ik// structure of [+k] is weak, as there is no palatalization in the vast majority of adjectival stems followed by [+k] e.g.: *gładki* 'smooth', *giętki* 'flexible', *miękki* 'soft', *wąski* 'narrow', *prędki* 'swift', *szybki* 'quick', etc. On general methodological grounds (simplicity of description) it seems more advisable to list two variants of two stems (*gor+*, *gož+*, *vag+*, vaš+) than to mark about twenty words as exceptions to rules of palatalization.

3.4. Our analysis of the comparative degree of Polish adjectives leads to the following conclusions:

i. The synthetic forms of the comparative degree of Polish adjectives are listed in the Lexicon.

ii. The allomorphy variation [+š]:[+ejš] is accounted for by the allomorphy rule of EJ-Epenthesis, which adds the morpheme [+ej] to adjectival stems ending with a consonantal cluster of the following shape: $C\begin{bmatrix}C\\+\text{son}\end{bmatrix}$

iii. The analytic forms of the comparative degree of Polish adjectives are generated by a productive Rule of Affixation.

4. CONCLUSIONS*

From our analysis of the relevant data the following conclusions may be drawn:

i. The lexical forms of comparative degree of Polish and English adjectives are isomorphic and generated by productive morphological rules.

ii. The morphological forms of comparative degree, although isomorphic, have markedly different status in linguistic competence of native speakers of the two languages under consideration. Polish word-forms must be listed in the Lexicon, while their English counterparts are generated by a productive morphological rule.

We suggest therefore, that an adequate contrastive morphological analysis should not be confined to stating the degree of isomorphism obtaining between the corresponding complex word-forms in L1 and L2. Structurally isomorphic complex word-forms may differ in another respect: they may exhibit varying degrees of lexicalization as a result of being derived by morphological rules of varying productivity. Consequently, in spite of apparent structural similarity, such items have a markedly different status in native speakers linguistic competence. Those described by unproductive "redundancy" rules must be sorted as separate lexical entries in speakers mental Lexicon while those accounted for by productive morphological rules could be readily generated by speakers.

In his classic study "How do phonological rules compare" (Gussmann 1975) Gussmann substantiated the claim that phonological processes of various languages must not be compared on the basis of their functional unity alone (the identity/similarity of the changes they effect e.g. palatalization, vowel nasalization, etc.). Gussmann (1975) points to other equally important factors:

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The details concerning all the rules of Polish phonology referred to in this paper are to be found in Rubach (1981).

— depth or ordering i.e. is the rule relatively early or relatively late within the phonology
— interaction with other phonological rules

and argues convincingly that functionally equivalent phonological rules of L1 and L2 have sometimes strikingly different status in the respective grammars when these factors are also taken into consideration.

Following the spirit of Gussmann's argument we suggest that an adequate contrastive morphological analysis should not be confined to stating semantic and formal equivalence between complex word-forms in L1 and L2. We have pointed out the advantages of two crucial insights of theoretical morphology for comparing morphological rules in two languages:

— the notion of rule productivity
— the distinction of Rules of Affixation and Rules of Derivation

The possibilities of corroborating our proposal are limited due to a small amount of descriptive work in generative morphology carried out to date. We hope, however, that they have been stated sufficiently clearly to invite criticism leading to further refinements.

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DUTCH LOANWORDS IN MUNSEE: THE CONTRASTIVE PHONOLOGY OF BORROWING

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0. One of the most interesting test-cases for contrastive phonology, and contrastive linguistics in general, is the situation of "languages in contact". The present study, analysing a case of contact between two genetically unrelated languages, viz. Dutch (a West-Germanic language of the Indo-European family) and Munsee (an Eastern Algonquian language), focuses on the methodological implications of these data for contrastive phonology.[1]

1. The language of the XVIIth century Dutch colonists of New Netherland has left various lexical traces in the Delaware languages. Ives Goddard has given us an extremely useful survey of the contingent of Dutch loanwords in Delaware, supplemented by a short list of Jersey Dutch and Swedish borrowings.[2] Among the Delaware languages, it is the Munsee dialect[3] (which

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[1] On contrastive linguistics and phonology, see Fisiak (1975, 1976), Eliasson (ed. 1984; cf. Swiggers 1985b). For some methodological implications of linguistic contacts, especially from the diachronic point of view, see Hamp (1970, 1972, 1975). The data given here complement those given in Swiggers (1985a), where no theoretical exploitation is offered.

[2] Goddard (1974), with subsequent use of the materials in Goddard (1982). For background information, see Goddard (1971).

[3] "Munsee is an Eastern Algonquian language, spoken at the time of European contact on the upper Delaware River and the lower Hudson. Subsequently, westward migrations brought the speakers of Munsee to scattered locations in Oklahoma Kansas, Wisconsin, western Ontario (three reserves), and western New York State. The're are at least fragmentary data from all of these places except Wisconsin, but except where noted the forms given in this paper are from speakers at Moraviantown and Muncey, on the Thames River in western Ontario. In 1965 there were about forty-four speakers; at present there may be no more than twenty, all at Moraviantown. It should be noted that locally the term "Munsee" is used only for the group at Muncey; the Munsee-speakers at

prevailed in New Netherland territory) that shows the largest number of borrowed words. Although our knowledge of the phonological systems of XVIIth century Dutch and Munsee (or Delaware in general)[4] is still imperfect,[5] an attempt will be made here to gain some insight in the phonological aspects of the transfer.

2. Munsee has adapted all the consonantal and vocalic phonemes of Dutch to its own phonological system. With regard to the consonant system, we can observe the following divergences between XVIIth century Munsee and Dutch:

MUNSEE

	Lab	Den	Pal	Vel	Glot
stops	p	t	č	k	
fric.		s	š	x	h
nasals	m	n			
approx.	w		j		
lateral		l			
trill		r			

DUTCH

	Lab	Alv/Pal	Vel	Glot
stops	p b	t d	k[6]	
fric.	f v	s z	γ x	h
nas.	m	n	ŋ	
appr.	w	j		
lat.		l		
trill		r		

Moraviantown consider themselves "Delawares". However, since "Delaware" is also the preferred self-designation in English of the Oklahoma Delawares, whose language is mutually intelligible with Munsee, it seems preferable for linguistic purposes to use the traditional labels, Munsee for the language now spoken in Ontario and Unami for that in Oklahoma" (Goddard 1982:16-17). Since the early XXth century, Munsee became extinct in Wisconsin, Kansas, Oklahoma and Cattaraugus; since 1965 it has become extinct at Six Nations Reserve.

[4] On the importance of Munsee (the most conservative Eastern Algonquian language from the phonological point of view) for the reconstruction of Common Delaware and of Proto-Algonquian, see Goddard (1978:71-3; 1982); on its position within Eastern Algonquian, see Goddard (1979; 1980).

[5] For the history of the Munsee phonological system, Goddard (1982) is of fundamental importance. As to XVIIth century Dutch, there are handbooks of the language of this "classical period" (see e.g. Hermkens 1973), but none of these offers a clear picture of the phonological system. To reconstruct this system, I have used data from the historical grammars of Dutch (Schönfeld 1921; de Witte 1962; Goossens 1974), and from XVIIth century grammatical descriptions (e.g. Christiaen van Heule, *De Nederduytsche Grammatica ofte Spraec-konst*, 1625; Samuel Ampzing, *Nederlandsch Tael-bericht*, 1628; Petrus Montanus, *De Spreeckonst*, 1635; A. L. Kok, *Ont-werp der Neder-duitsche Letter-konst*, 1649).

[6] According to the descriptions of the XVIIth century grammarians, Dutch had no phoneme /g/: the sound [g] occurred only in assimilatory contexts (before d and b); see the remarks by Montanus, *De Spreeckonst* (cf. note 5), p. 80.

The units of the Dutch consonant system grouped together into blocks were uniformly rendered in Munsee[7]:

1. Munsee p reflects Dutch p, b. f. and v:
   Munsee *pán* :: Dutch *pan* [pan]
   Munsee *pó:təl* :: Dutch *boter* [bo·tər]
   Munsee *pə̆lánšə̆ma:n* :: Dutch *fransman* [fransman]
   Munsee *šə́lpəl* :: Dutch *zilver* [zɪlvər]
2. Munsee š renders Dutch s, z (and for the variant š, see below):
   Munsee *šə̆mə́t* :: Dutch *smid* [smɪt]
   Munsee *šak-* :: Dutch *zak* [zak]
3. Munsee l stands for Dutch l and r:
   Munsee *mó:kəl* :: Dutch *moker* [mo˙kər]
   Munsee *mə̆lə́k* :: Dutch *melk* [mɛlk]

We may conjecture that a similar adaptation would have taken place for Dutch t and d (>Munsee t), and for Dutch γ and × (> Munsee ×), but we have no examples of loanwords with [d] and [γ].[8] Two further facts should be noted about the consonant correspondences. The first is the systematic use of Munsee š (not s) for Dutch s, a fact which reminds one of the equally disturbing correspondences — as far as the system of sibilants is concerned — between Egyptian and Akkadian, and between Sumerian and Babylonian adaptations.[9] Here the explanation must be sought in the pronunciation of Dutch s, which was (and still is, at least in Belgian Dutch) an alveolar sound (with slight apex retraction):[10] this sound (and its voiced counterpart z) was nearer to Munsee š than to Munsee s (a dental sound).[11]

The second observation concerns the presence of non-phonological sounds in the Dutch loanwords. More specifically, two forms must be mentioned here:

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[7] For the notation of the Munsee words I follow Goddard (1974); the colon indicates length (of the preceding vowel or consonant), the acute accent marks primary stress and the grave marks secondary stress. For the translation of the loanwords, I refer to Goddard's article.

[8] There are no examples in Goddard's (1974) list, nor in a shorter list of additions sent to me in June 1984. I am grateful to Ives Goddard for his precious help in these matters.

[9] For the correspondences between Egyptian and Akkadian (both Babylonian and Assyrian), see the list of proper names in Vergote (1973:84-101); for the correspondences between Sumerian and Babylonian, see Lieberman (1977:98-9, 115-7).

[10] This fact explains why Dutch morpheme-final s followed by the diminutive j (e.g. *bosje, baasje*) has given way to the pronunciation š ([bɔšə], [ba˙šə]).

[11] With the apex taking an interdental position, as can be gathered from the attested pronunciation (Cattaraugus, Six Nations Reserve) θ (graph ⟨ç⟩) for Munsee-s; see Hewitt (n.d.), Brinton — Anthony (1888:vi-vii), and Goddard (1982:18, note 3).

Dutch *kuš-kuš* (Munsee *kó:ško:š*)
Dutch *poes* (Munsee *pó:ši:š*)

Both Dutch forms are in fact call-names for animals (respectively, pigs and cats). The Dutch standard word for "pig" was *varken/verken* (modern standard Dutch *varken*), and *kuš-kuš* was (and still is) a call-note for pigs. This word, which has a non-phonological [š] from the point of view of standard Dutch, is typical for East-Flemish and East-Netherlandic dialects.[12] The word seems to have spread from the East-Walloon area[13] towards Limburg and the Rhenish area. In this word, therefore, there was a sound [š], which corresponds exactly to Munsee š. The same sound also occurs in the call-name of the cat (standard Dutch *kat*): *poes*. This word has two phonetic realizations when used affectively: [pus] and [puš] (diminutive: [puskə] or [puškə]).[14]

3. The adaptation mechanism for the vocalic units offers more problems, especially because of our defective knowledge of the vowel systems of XVIIth century Munsee and Dutch. Goddard (1982:18) retains eleven vocalic units for present-day Munsee (viz. *ə*, *a*, *i*, *e*, *o*, *ə̆*, *ă*, *i·*, *e·*, *a·*, *o·*), but the extra-short vowels *ə̆* and *ă* can be reduced to *e* and *a* in function of the environment (stress context).[15] The phonetic values of the remaining nine units are:

/ə/ : [ə], with conditioned variants [I], [U] and [ʌ]
/a/ : [ʌ], with conditioned variant [a]
/i/ : [I]
/e/ : [ε]
/o/ : [U]
/i·/ : [iʸ·]
/e·/ : [ε·]
/a·/ : [a·], with free variant [ɒ·] and conditioned variant [ɑ·]
/o·/ : [o·]

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[12] On this dialect word, see Breuls (1916:114), Goossenaerts (1956–1958:371, s.v. *keus*, *keuske*); Jaspars (1979:253, s.v. *kusj*, *kuzzje*), and Staelens (1982:481, s.v. *varken*: *koesjke*). According to Van Os (1981:99), *kuus-kuus* would be a call-note for cows.

[13] On the Walloon word, see Sigart (1866:130, forms *couche*, *couche-couche*, *coucouche*), Wisimus (1947:110 and 113, forms *cucusse* and *cusse! cusse!*), and Haust (1948:103, *cuche*, *cuchèt*, *cucusse*, *cusse*). See also Jersey French koš "sow" (Spence 1960:138); for the etymology, see FEW (vol. II:1254-56).

[14] On allophonic variation in affective speech (with application to Dutch), see Roelandts (1966; 1975).

[15] The transcription used in Goddard (1982) "was arrived at after experimenting with more abstract levels, which were found to be less convenient" (1982:18). For the role of stress in Munsee, see Goddard (1974:153; 1982:19).

The vowel systems of XVIIth century Munsee and Dutch can be reconstructed as follows:

MUNSEE

	Front	Centr.	Back
close	iᵛ·	I U	o·
half open	ɛ·	ə	
open	ɛ	a·	ʌ

DUTCH

	Front	Central	Back
close	i y e· ø	ɪ ʏ ə	u· o·
half open	ɛ (œ)		ɔ
open		a·	ɑ

The following systematic correspondences obtain:

1. Munsee /a·/ :: Dutch /a·/ and /ɑ/

examples:	Munsee *níwə̆ya:l*	Dutch *nieuwjaar* [ni·wja·r]
	Munsee *á:pə̆lə̆š*	Dutch *appel* [ɑpəl]

2. Munsee /a/ :: Dutch /ɑ/

examples:	Munsee *pán*	Dutch *pan* [pɑn]
	Munsee *pámpi:l*	Dutch *pampier*[16] [pɑmpi·r]

3. Munsee /ɛ·/ :: Dutch /ɛ/

example:	Munsee *hé:mpət*	Dutch *hemd* [hɛm(p)t]

4. Munsee /i·/ :: Dutch /i·/, /ɪ/ and /e·/

examples:	Munsee *pámpi:l*	Dutch *pampier* [pɑmpi·r]
	Munsee *pí:lkəš*	Dutch *pirkes*[17] [pɪrkəs]
	Munsee *šə̆wí:p*	Dutch *zweep* [zwe·p]

5. Munsee /o·/ :: Dutch /o·/ and /u·/

examples:	Munsee *mó:kəl*	Dutch *moker* [mo·kər]
	Munsee *káto:n*	Dutch *katoen* [kɑtu·n]

If one discards the problem of vowel length, the correspondences are rather straightforward. The Dutch close front vowels i· and e· are rendered by the close front vowel iˑ in Munsee (which can also reflect Dutch ɪ), and Munsee /oˑ/ is used for the Dutch close back vowels uˑ and oˑ. The functionally most loaded unit is Munsee /ə/, which stands for

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[16] According to Goddard (1974:156) this is a non-standard Dutch form; it was, however, the usual XVIIth century word (compare Oudemans 1869—1880: vol. V, 553; Verdam 1932:459). Note that this was also the form used in the Dutch dialect of Old New York (see Van Loon 1938:31).

[17] This form must be Jersey Dutch, as rightly noted by Goddard (1974:156; 1982: 33). The Old New York Dutch form was *pirkes* (see Van Loon 1938:31). The Middle Dutch form was *perker, perkel, peseker*, or *perke* (see Oudemans 1869—1880: vol. V, 590 and 598; Verdam 1932: 463).

- Dutch ɪ : Munsee *kə̆št*, *šə́lpəl*, corresponding to Dutch *kist* [kɪst] and *zilver* [zɪlvər]
- Dutch ɛ : Munsee *mə̆lə́k*, from Dutch *melk* [mɛlk]
- Dutch ʸ : Munsee *škə́p*, from Dutch *schup* [sxʸp], dialect variant [skʸp]
- Dutch ɔ : Munsee *tə̆lə́mp*, from Dutch *tromp* [trɔmp][18]
- Dutch ə : compare the above mentioned words *á:pə̆lə̆š*, *pí:lkəš* and *šə́lpəl*,

and which, in addition, is used as an epenthetic vowel to avoid the following intra-syllabic consonant clusters in Dutch: *m(p)t*, *kn*, *lk*, *fr* (Munsee *pəl*), *br* (Munsee *pəl*), *sl*, *sm* (Munsee *šəm*), *zw* (Munsee *šəw*), *tr* (Munsee *təl*).[19]

Although one cannot exclude the possibility that some of these words were borrowed in a specific dialect form of XVIIth century Dutch that would give optimal results for the analysis of the correspondences (by having, for instance, a more open pronunciation of /uˑ/), it seems that the reconstructed phonemic inventories can help us to gain more insight in the phonological adaptation of Dutch loanwords in Munsee.

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[18] Variant: [trʸmp]; see Verdam (1932:619). For further information on this word, see Van Wijk (1912:710), and Van Sterkenburg (1981:247).

[19] See Goddard (1982:33) on optional ə̆/ă insertion. In many Dutch dialects, an epenthetic vowel is inserted in some of these clusters (e.g. *melk*, pronounced [mɛlək]; in XVIIth century Dutch this phenomenon might have been more widespread.

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TRANSFER AND RELATED STRATEGIES IN THE ACQUISITION OF ENGLISH RELATIVE CLAUSES BY ADULT ARAB LEARNERS

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INTRODUCTION

The focus of research in second language acquisition in recent years has shifted from a teaching perspective to an emphasis on learning. The processes through which a second language is learned as well as the learner's production of the target language have been under close scrutiny. The learner is viewed as an active participant engaged in a creative construction process, formulating and testing rules and hypotheses and employing various rules and strategies in understanding and producing utterances in the larget language. (cf. Corder, 1967; Selinker, 1969; Nemser, 1971; and Dulay and Burt, 1974).

While there is an abundance of contrastive analysis and error analysis studies dealing with the acquisition of phonological and morphological components of English by learners from many different language backgrounds, there are relatively speaking few studies that are totally devoted to the area of syntax.

Within the area of syntax, relativization is an important and rich structure. In the literature, the acquisition of English relativization by Arab ESl learners has not received a thorough investigation (cf. Fox, 1970; Schachter, 1974; Scott and Tucker, 1974; Schachter et al., 1976; Ioup and Kruse, 1977; and Gass, 1979). Many questions remain to be answered satisfactorily in these studies. There is a controversy among these researchers about the role of language transfer. The nature of transfer and other strategies is not adequately treated.

There are many reasons that motivate a comprehensive study of the acquisition of English relativization by Arab ESL learners. Among the research questions that remain to be answered satisfactorily are the problems that

Arab ESL learners encounter in the acquisition of English relativization. On the basis of previous studies and personal experience, some of these problems include the appearance of the resumptive pronoun, relative pronoun deletion, selection and morphology, and the lack of distinction between restrictive and nonrestrictive relative clauses in English.

In this study, a sample of written production of English relative clauses by Arab ESL learners from the elementary, intermediate, and advanced ESL levels is analyzed. Problematic areas in English relativization are isolated and identified. Errors are quantified in terms of percentages of occurrence so as to determine the influence of interlingual and intralingual factors. Finally, the role and nature of language transfer and other perceptual and production strategies involved in the acquisition of English relativization by Arab ESL learners are investigated more thoroughly.

RESEARCH DESIGN AND METHODOLOGY

The Four Tests

Following Adams (1978), who recommends the use of multiple measures n data elicitation in second language acquisition research, four types of data elicitation techniques were used in this study in order to elicit and analyze the written English output of Arab ESL learners. These included a translation test, a grammaticality judgment task, a sentence combining test and a multiple choice test.

The translation test involved the translation of twelve sentences from Modern Standard Arabic into English. These sentences represented relativization on the six positions of the Noun Phrase Accessibility Hierarchy of Keenan and Comrie (1977). The grammaticality judgment task consisted of twenty-four English sentences all of which with the exception of three sentences contained a relative clause malformation. In the sentence combining test, the Arab ESL learners were instructed to combine twelve pairs of English sentences so as to make one sentence out of each pair. In the fourth task, the multiple choice test, the subjects were presented with twelve sentences each containing a relative clause with a missing element. The subjects were instructed to complete the sentences by choosing the correct answer from a list of three alternatives.

Implementation of the study

One hundred and two Arab ESL learners participated in this study. These 102 learners were distributed according to the institution they studied at as follows:

1. The University of Texas at Austin Intensive English Program. (37)
2. English 306Q, The University of Texas at Austin Department of English. (18)

3. The Wilton Language Center, Central Texas College, Killeen, Texas. (28)
4. St. Edward's University, Austin, Texas. (19)

These Arab ESL learners had already completed their secondary education in their home countries. However, their English language proficiency as represented by their TOEFL scores did not qualify them to enroll in regular college courses. Consequently, they were studying intensive English at English language institutions and intensive English programs. Upon the successful completion of two, three, or four semesters of intensive English, depending on their English language proficiency and the achievement of a score of 550 or more on the TOEFL, these learners enter American colleges and universities.

The directors of the English language programs at the above-mentioned institutions were contacted to secure the participation of their Arab ESL learners in this study. A letter explaining the nature and purpose of this study together with a sample copy of the questionnaire for obtaining basic information about the subjects and a copy of the four tests were sent to these directors. After obtaining the approval of the directors, the questionnaire and the four tests were administered with the help of English language instructors at these institutions in two separate sessions. In both sessions, the subjects were told not to worry about grammatical errors or spelling mistakes. They were also told to answer all the items in the four tests.

The Informal Interviews

The questionnaires and the tests were collected, and an initial error analysis was performed on the corpus. Later, informal interviews were conducted with small groups of Arab ESL learners. The aim of these interviews was to gain insights about strategies used by Arab ESL learners when they acquire English relativization. This is in line with the arguments of Jordens (1977), Tarone (1977), Kellerman (1977; 1979), and Sharwood-Smith (1979) who call for "participant observation" in order to know what the learners intend in their linguistic production in the second language.

The atmosphere in these interviews was informal and friendly. The subjects were asked some questions about their performance in the tests. The reseacher encountered some problems in conducting these informal interviews. In some cases, there was a time lapse between taking the tests and conducting the interviews. In addition, some subjects, particularly those who came from elementary levels, were uncertain about some questions in the interviews. Consequently, the researcher had to assist these subjects in eliciting metalinguistic explanations about their performance. The subjects' responses in the informal interviews were recorded by the researcher. Later, these responses and comments were analyzed and generalizations about the subjects' responses were made. These generalizations are presented in connection with the results of the four tests in the following section.

RESULTS AND DISCUSSION

After collecting the data, an error analysis was performed on the corpus. The interlanguage of the subjects as manifested in their English production in the four tests was analyzed. The researcher adopted the criteria proposed by Abbott (1980) for the well-formedness of relative clauses. Any deviation from the above criteria was considered erroneous. The data from the error analysis are given in Tables 1-7, Appendix A. As can be seen from these tables, the majority of the Arab learners' errors involved the appearance of the resumptive pronoun in all six relativizable positions of the Noun Phrase Accessibility Hierarchy of Keenan and Comrie (1977). The appearance of the resumptive pronoun in these positions is apparently a case of language transfer from the students' native language, Arabic. The question of whether transfer comes from Modern Standard Arabic or colloquial Arabic is irrelevant here because in both Modern Standard Arabic and colloquial dialects of Arabic, the resumptive pronoun occurs in the same type of structure. The nature and role of language transfer as it pertains to the appearance of the resumptive pronoun is discussed below.

Language Transfer

The most frequent error in the production of English relative clauses in all four tests employed in this study was the appearance of the resumptive pronoun in the relativized site. This finding corroborates the findings of Schachter (1974), Schachter et al. (1976), Ioup and Kruse (1977), Scott and Tucker (1974), and Gass (1979) that Arab ESL learners extensively use the resumptive pronoun in English relativization. This study also lends support to the Noun Phrase Accessibility Hierarchy of Keenan and Comrie (1977), who indicate that lower positions on the Hierarchy are more difficult to relativize than higher positions. That this was the case in this study too can be seen in Table 1-4, Appendix A, where Arab ESL learners made more errors in the last three positions of the Hierarchy than in the higher positions.

In addition to the frequent use of the resumptive pronoun, other interlingual errors in the corpus included relative pronoun omission, preposition omission, and the use of possessive pronouns with the antecedent. Relative pronoun omission was reported in other studies (cf. Scott and Tucker, 1974; Schachter et al., 1976; and Gass, 1979). It is attributed to interference from the native language since in Arabic there are no relative pronouns if the antecedent is indefinite. Examples from the corpus are given below:

(1) *I saw a man was looking for you.
(2) *A man bought the car is rich.
(3) *I got a friend speaks Spanish.

Preposition omission in the indirect object position, and the use of possessives with the antecedent are also caused by interference from Arabic since there are no prepositions in the indirect object positions and no constraints on the use of possessives with the antecendent in Arabic. Both error types from the corpus are illustrated below:

Preposition omission

(4) *The girls who I gave the books returned to school.
(5) *I saw the girl who I sent a letter.

Use of the possessive pronoun with the antededent

(6) *His house which he built is large.

Generally speaking, the extensive use of the resumptive pronoun in English relativization by Arab ESL learners appears to be a case of language transfer from the learners' native language, Arabic, to the target language, English.

Language transfer seems to operate on two levels: the cognitive level and the automatization level. On the congitive level, the learner uses previous knowledge, i.e., the native language, for the assimilation of new language items, i.e., the target language, which can result in facilitative effects depending on the similarities between the native language and the target language or inhibiting effects if the native language structure and lack of knowledge of the target language structure lead to wrong assimilation of the target language elements. On the level of automatization, transfer occurs if the structures are similar for the native language and the target language. This view of language transfer operating on two levels resembles the conception of transfer by Kellerman (1977) as involving two stages: projection and conversion.

The transfer of the resumptive pronoun from Arabic to English relativization by Arab ESL learners represents one type of language transfer. This type of language transfer is easy for the researcher to perceive because it is a more or less direct transfer. This also implies that the learner must consider the native language and the target language as sufficiently similar for the transfer to be successful. This type of direct, interlingual transfer is here called *inferencing transfer* because the learner makes use of prior knowledge and experience in order to form hypotheses about the target language by applying prior knowledge and experience to the target language intake. There is also another type of transfer which is not as easily perceived by the researcher as inferencing transfer. This type of transfer is indirect and interlingual in which the learner makes use of already available interlanguage knowledge. This type of transfer which is due to interference from the target language can be called *non-inferencing transfer*. An example of errors caused by non-inferencing transfer is the lack of distinction between restrictive and non-restrictive relative clauses in the interlanguage of the Arab ESL learners in this study. This distinction is clearcut in English (cf. Quirk et al., 1972:857-871).

As such, non-inferencing transfer of grammatical features seems to be conditioned by two factors: (a) simplification of the target language structure, and (b) possible failture to distinguish between two surface structures in the target language when the native language has only one surface structure. Thus, transfer appears to be of two types: direct, interlingual, inferencing transfer and indirect, intralingual, non-inferencing transfer.

Intralingual Errors

Besides the preponderance of interlingual errors represented by the appearance of the resumptive pronoun in all relativizable positions in English, there were also other types of errors, namely, the intralingual errors. These include overgeneralization of the target language features and simplification of the target language structures. That intralingual factors, more specifically the inherent difficulty of some types of English relative clauses influenced the Arab ESL learners' English production in this study is supported by the results of the informal interviews with these students.

Errors under this category included relative pronoun selection, relative pronoun morphology, and subject-verb agreement. Each of these errors is discussed below with illustrative examples from the corpus.

Errors involving relative pronoun selection were very ferquent in the production of Arab ESL learners. In fact, errors of this type occurred in all four tests and involved all three levels of English language proficiency, though to varying degrees (cf. Tables 1—4, Appendix A). Typical examples are given below:

(7) *John hates *whom* his brother likes.
(8) *John hates *which* his brother likes.
(9) *The book *who* I borrowed from the library is new.

Errors involving wrong selection of relative pronouns occurred in all four tests. This type of error is undoubtedly an intralingual error since Arabic relative pronouns have one underlying base with phonological differences and are not as distinct as English relative pronouns. Consequently, Arab ESL learners encounter difficulty in relative pronoun selection in English. They overgeneralized the use of *which* for example to include references to human as well as non-human antecedents.

Errors involving relative pronoun morphology are clearly intralingual errors. Arabic relative pronouns are inflected for gender, number, and case in MSA but not in the dialects. These inflections are clearcut and there is no confusion as to what relative pronouns refer to which antecedents. English relative pronouns, on the other hand, are not as distinct as their Arabic counterparts in gender and number. For example, *whose* and *whom* can be used with masculine and feminine antecedents as well as singular and plural ones. In addition, there is a controversy over whether to use *who* or *whom* in the accusative case. This being the case, it is not surprising that Arab ESL learners commit so many errors involving relative pronoun morphology. The source of difficulty is inherent in English. The following is a representative sample:

(10) *The men *whom* are talking are friends.
(11) *The women *whose* went to the market came back.
(12) The boy *whom* father came here is Samir.

There were cases in which Arab ESL learners thought that *who* was always singular and consequently overgeneralized its use. Scott and Tucker (1974) indicate that this error can be explained by the fact that some learners in their study equated *who* with the Arabic relative pronoun *allaðii* which is the singular, masculine relative pronoun in MSA. However, a more plausible explanation for this error is that Arabic relative pronouns have one underlying base with phonological differences. Also, Arab ESL learners in this study thought that *whom* and *whose* are relative pronouns always used in the plural form. Example:

(13) *The people who is talking to each other are friends.

Simplification

In addition to the intralingual errors involving overgeneralization, there were other types of errors which occurred as a result of simplification of English forms. Simplification in this study was manifested in the learners' use of simple sentences instead of sentences containing relative clauses and multiple embedding, and the conjoined clause interpretation of relative clauses. These ways of simplifying English relative clauses are illustrated below.

Many Arab ESL learners found some types of English relative clauses difficult to produce, particularly relative clauses on the lower positions of the NPAH and sentences containing multiple embedding. Consequently, these learners opted for simple sentences instead of relative clauses. Examples:

(14) The son of the teacher is named Ali.
(15) Samir's father came here.

In other instances, Arab ESL learners opted for a sequence of two sentences instead of relative clauses. Examples:

(16) Samir is an engineer. He came to visit us.
(17) John dated the girl. Alice is taller than her.

Another finding which has not been discussed in previous studies is that Arab ESL learners, especially elementary level learners, tend to interpret relative clauses in English as conjoined sentences (see Table 5, Appendix A).

This was done in two ways: (a) using the coordinators *and* and *but*, (b) using the subordinators *after*, *when*, and *because*. Examples:

(a) Coordination
  (18) The two boys are polite *and* I talked to them.
  (19) Susan wrote a letter to the girl *but* she never answered her.

(b) Subordination
  (20) The boy came back *after* I gave him the book.
  (21) The man bought the car *because* he is rich.
  (22) I saw the two men *when* they entered the house.

Structural Misrepresentation of Relative Clauses

Another type of error made by the ESL learners in this study can be called structural misrepresentation of English relative clauses (see Table 6, Appendix A). This type of error was pervasive and was found in all four tests. There were specific types of errors that caused difficulty across the board. Structural misrepresentation of relative clauses is exemplified below:

(a) Repetition of the identical NP
(23) *The knife which he cut with the knife is sharp.

(b) Relative clause preposing
  (24) *Susan wrote a letter to the girl never answered it.

(c) Incorrect word order
  (25) *The knife he cut with which is sharp.

(d) Missing antecedent
  (26) *Who studies for the examination succeeds.

(e) Use of the possessive pronoun before the antededent
  (27) *His house which he built is large.

(f) Use of the definite article instead of the relative pronoun
  (28) *The man the came here is rich.

(g) Use of personal pronouns instead of the relative pronoun
  (29) *I get a friend he speaks Spanish.

(h) Use of possessive pronouns instead of the relative pronoun
  (30) *The boy his father is a teacher is Ali.

Structural Reordering of Relative Clauses

Arab ESL learners in this study reordered the structure of English relative clauses in the four tests. Unlike the ungrammatical instances of the structural misrepresentation of relative clauses illustrated above, sentences involving

structural reordering were always grammatical. There were four types of structural reordering of relative clauses. These types are similar to those found by Gass (1980). These types are illustrated below:

(a) Substitution of one lexical item for another, usually the polar opposite of an adjective
(31) The woman who is uglier than Selma is Selwa.

(b) Switching the order of the two sentences so as to embed the sentence which was intended as the matrix
(32) John sold the book to the student who came here.

(c) Changing the identical NP
(33) John dated Alice who is taller than the girl.

(d) Changing the syntactic structure of the second sentence
(34) The table on which the book was put is large.

Reinterpretation of Relative Clauses

Arab ESL learners also reinterpreted relative clauses in the four tests. Reinterpretation of English relative clauses in this study seems to be accomplished by paraphrasing English relative clause structure as in (35) or because of the incomplete acquisition of the structures involving relativization on the lower levels of the NPAH as in (36) below:

(35) The son of the teacher is Ali.
(36) Samira is the name of the girl whose brother travelled.

STRATEGIES

From the discussion of the corpus presented thus far, it seems apparent that Arab ESL learners rely on certain strategies in processing English relative clauses. In what follows, a brief discussion of the kinds of strategies that the Arab ESL learners in this study seemed to be using, is presented. Transfer as a strategy in producing relative clauses was discussed in some detail earlier in this paper. In this section, production and perceptual strategies are briefly discussed.

Production Strategies

In addition to the language transfer strategy used by the learners in this study, the Arab ESL learners used other production strategies which are well-documented in the literature. These strategies included overgeneralization and simplification of the target language structures.

Besides the use of overgeneralization and simplification as production strategies, Arab ESL learners employed what we can call the Structural Misrepresentation Strategy. This strategy was evident in such errors as the repetition of the identical NP, relative clause preposing, incorrect word order, missing antecedents, the use of possessives immediately before antecedents, and the use of the definite article, personal pronouns, and possessive pronouns instead of relative pronouns. These types of errors were discussed and illustrated in the previous section. The use of structural misrepresentation as a production strategy is attested in the literature dealing with first language acquisiton (cf. Bever, 1970; Klima and Bellugi, 1973; Solan and Roeper, 1981).

Perceptual Strategies

The learners in this study also employed perceptual strategies which hitherto have not been discussed in studies dealing with the acquisition of English relative clauses by Arab ESL learners. That these learners employed perceptual strategies in processing English relative clauses is supported by the results of the informal interviews with these learners.

A prominent perceptual strategy which the Arab ESL learners relied on was the Conjoined Clause Analysis of relative clauses. This perceptual strategy is supported by studies in first language acquisition and also by linguistic theory (cf. Thompson, 1971; Prideaux, 1979; Tavakolian, 1981).

A second perceptual strategy that can be inferred from the interlanguage of the Arab students is what can be called here the Saliency Factor. By this it is meant that these learners have undoubtedly observed the obvious similarities between English and Arabic in relativization and consequently relied on this similarity as a perceptual strategy in their production of English relative clauses.

The third perceptual strategy that was employed by the subjects in their comprehension of English relative clauses is the NP-V-NP strategy. This perceptual strategy was discussed and illustrated in the previous section where the learners produced simple sentences or sequences of two simple sentences instead of relative clauses. Learners seem to be searching for the NP-V-NP sequence in comprehending English relative clauses.

The fourth perceptual strategy is what can be called here the No Gapping Strategy or the Resumptive Pronoun Strategy. This strategy was manifested in the retention of the resumptive pronoun in all relativizable positions of the NPAH. The retention of the resumptive pronoun was more extensive in the lower (more difficult) levels (see Tables 1—4, Appendix A). There is strong evidence from the data indicating that Arab ESL learners reject the gapping strategy in English relative clauses and prefer instead the resumptive pronoun strategy as a perceptual aid in processing English relative clauses.

CONCLUSIONS AND IMPLICATIONS

There is evidence in the findings of this study for several conclussions and implications to be drawn regarding the acquisition of English syntactic structures as exemplified in the acquisition of English relativization by Arab ESL learners.

(1) English relative clauses constitute a major syntactic difficulty for Arab ESL learners. More specifically, the absence of the resumptive pronoun in English relativization, relativization on lower levels of the NPAH, the distinction between restrictive and non-restrictive relative clauses, and multiple embedding are more difficult to master than other relativization features.

(2) Language transfer is a significant factor that should be taken into account if an adequante description of interlanguage performance is to be achieved. Furthermore, there is evidence in this study supporting the characterization of transfer as a linguistic phenomenon that seems to operate on two levels: cognitive and automatization.

(3) A distinction between inferencing transfer which is a direct, interlingual type and non-inferencing transfer which is an indirect, intralingual type, can be made.

(4) There are both interlingual errors as well as intralingual errors in the interlanguage of the Arab ESL learners in this study.

(5) Besides the strategies of overgeneralization and simplification already known in the field, Arab ESL learners in this study apparently employed perceptual and production strategies that, to my knowledge, have not been discussed in similar studies.

(6) The retention of the resumptive pronoun may be an example of a fossilized error which continues to surface in the interlanguage of learners even in very advanced ESL levels.

(7) Any unifactor approach will be inadequate in characterizing the interlanguage of Arab ESL learners. Any adequate account of the process of second language acquisition has to take into account a multifactor approach in which the native language, the target language, and language acquisition universals play complementary and synthesizing roles.

(8) Finally, the findings of this study imply that it might be possible to reconcile the conflicting views of behaviorists and cognitivists and thus give new life to the old aspirations of the Contrastive Analysis Hypothesis if our characterization of language transfer proves to be tenable and if language learning is viewed as the development of cognitive ability plus the automatization of language skills.

APPENDIX A

THE STATISTICAL RESULTS

Table 1

Frequency and Percentage of Errors in the Translation Test

LEVELS ERROR TYPE	ELEMENTARY (N=43)			INTERMEDIATE (N=32)			ADVANCED (N=27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
Resumptive Pro. in SU	9	86	10%	3	64	5%	4	54	7%
Resumptive Pro. in DO	16	86	19%	11	63	17%	5	52	10%
Resumptive Pro. in IO	36	82	44%	13	60	22%	5	52	10%
Resumptive Pro. in OBL	57	76	75%	18	57	32%	7	50	14%
Resumptive Pro. in GEN	63	70	90%	27	58	47%	10	50	20%
Resumptive Pro. in O COMP	56	64	88%	44	60	73%	23	49	47%
No Relative Clause	58	500	12%	29	374	8%	5	324	2%
Relative Pro. Omission	18	481	4%	8	352	3%	3	318	1%
Relative Pro. Selection	47	473	10%	17	343	5%	12	315	4%
Preposition Omission	24	215	11%	15	160	9%	17	185	9%

Table 2

Frequency and Percentage of Errors in the Grammaticality Judgment Test

LEVELS ERROR TYPE	ELEMENTARY (N=43)			INTERMEDIATE (N=32)			ADVANCED (N=27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
Resumptive Pro. in SU	12	43	28%	6	32	19%	2	27	7%
Resumptive Pro. in DO	13	42	31%	3	32	9%	0	27	0%
Resumptive Pro. in IO	14	42	33%	7	32	22%	3	27	11%
Resumptive Pro. in OBL	23	41	56%	6	31	19%	3	27	11%
Resumptive Pro. in GEN	19	41	46%	11	31	35%	3	27	11%
Resumptive Pro. in O COMP	35	40	88%	22	30	73%	11	27	41%
Relative Pro. Selection	37	40	93%	22	30	73%	14	27	52%
Relative Pro. Morphology	26	40	65%	14	28	50%	3	27	11%
Relative Pro. Omission	37	82	45%	15	60	24%	12	54	22%
Preposition Omission	25	301	8%	15	224	7%	1	189	0.50%
No Relative Clause	45	1010	5%	21	760	3%	1	648	0.15%
Relative Clause Preposing	23	41	56%	10	31	32%	11	27	41%
Subject-Verb Agreement	30	43	70%	9	30	30%	3	27	11%
Repetition of Identical NP	12	42	29%	2	32	6%	0	26	0%
Adjacency	81	86	95%	48	62	77%	37	53	70%
Incorrect Word Order	33	80	41%	8	62	13%	4	52	8%
Use of Possessives with Antec.	37	42	88%	25	29	86%	22	27	81%
Use of Pronominal Relativizer	24	42	57%	8	30	27%	4	27	15%
Use of Def. Art. for Rel. Pro.	11	40	28%	6	30	20%	0	27	0%
Missing Antecedent	72	80	90%	42	59	71%	36	50	72%
Restrictive/Non-restrict. R.C.	41	43	95%	27	29	93%	19	25	76%
Multiple Embedding	29	35	89%	24	28	80%	21	24	88%

Table 3

Frequency and Percentage of Errors in the Sentence Combining Task

LEVELS ERROR TYPE	ELEMENTARY (N=43)			INTERMEDIATE (N=32)			ADVANCED (N=27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
Resumptive Pro. in SU	0	86	0%	0	64	0%	1	54	2%
Resumptive Pro. in DO	10	86	12%	3	64	5%	1	54	2%
Resumptive Pro. in IO	10	84	12%	4	62	6%	1	52	2%
Resumptive Pro. in OBL	15	80	19%	6	60	10%	2	52	4%
Resumptive Pro. in GEN	18	82	22%	12	58	21%	3	52	6%
Resumptive Pro. in O COMP	22	80	28%	24	60	40%	9	52	17%
No Relative Clauses	18	508	4%	5	380	1%	7	324	2%
Relative Pro. Selection	39	514	8%	5	380	1%	7	324	2%
Preposition Omission	9	215	4%	2	160	1%	4	135	3%
Relative Pro. Omission	35	510	7%	23	380	6%	5	322	2%
Repetition of Identical NP	68	508	13%	24	382	6%	4	324	1%

Table 4

Frequency and Percentage of Errors in the Multiple Choice Test

LEVELS ERROR TYPE	ELEMENTARY (N=43)			INTERMEDIATE (N=32)			ADVANCED (N=27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
Resumptive Pro. in OBL	19	43	44%	10	32	31%	1	27	4%
Resumptive Pro. in GEN	26	43	60%	8	30	25%	3	27	11%
Resumptive Pro. in O COMP	38	43	88%	21	31	68%	7	27	26%
Relative Pro. Selection	23	40	58%	12	32	38%	4	27	15%
Relative Pro. Morphology	19	38	50%	8	28	29%	2	27	7%
Omission of Relative Pro.	22	80	28%	7	64	11%	3	54	6%
Restrictive/Non-restrict. R.C.	57	78	73%	42	62	68%	39	54	72%
Subject-Verb Agreement	9	41	22%	3	30	10%	0	27	0%
Word Order	22	42	52%	6	31	19%	4	27	15%
Relative Clause Preposing	26	42	62%	14	30	47%	10	27	37%

Table 5

Frequency and Percentage of the Conjoined Clause Analysis of Relative Clauses

TESTS	ELEMENTARY (N=43)			INTERMEDIATE (N=32)			ADVANCED (N=27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
TRANSLATION	31	510	6%	11	376	3%	5	322	2%
GRAMMATICALITY JUDGMENT	73	1022	7%	37	760	5%	14	644	2%
SENTENCE COMBINING	87	506	17%	52	378	14%	7	324	2%
MULTIPLE CHOICE	21	512	4%	12	376	3%	3	324	1%

Table 6

Frequency and Percentage of Structural Misrepresentation of Relative Clauses

TESTS	ELEMENTARY (N=43)			INTERMEDIATE (N=32)			ADVANCED (N=27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
TRANSLATION	72	510	14%	48	376	13%	38	324	12%
GRAMMATICALITY JUDGMENT	215	1022	21%	163	760	21%	67	648	10%
SENTENCE COMBINING	64	508	13%	47	378	12%	18	324	6%
MULTIPLE CHOICE	38	512	7%	26	376	7%	12	324	4%

Table 7

Frequency and Percentage of Structural Reordering of Relative Clauses

TESTS	ELEMENTARY (N=43)			INTERMEDIATE (N=32)			ADVANCED (N=27)		
	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error	Frequency	Total Usage	Percentage of Error
TRANSLATION	81	510	16%	56	376	15%	21	322	6%
GRAMMATICALITY JUDGMENT	106	1022	10%	77	760	10%	35	644	5%
SENTENCE COMBINING	145	508	29%	84	378	22%	24	324	7%
MULTIPLE CHOICE	48	512	9%	32	376	9%	10	324	3%

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ON THE DISPARITY BETWEEN MORPHOLOGICAL AND SEMANTIC STRUCTURE OF DERIVATIVES*

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1. INTRODUCTION

This paper aims at examining the issue of incompatible morphological and semantic analyses of regularly derived words carried out within the framework of generative word formation.

A few generative linguists in the United States, including Rochelle Lieber, Elisabeth Selkirk and Edwin Williams, have put forward an analysis of the internal structure of certain semantically transparent formations (e.g. *reeducate*, *macroeconomic*) which contradicts traditional morphological descriptions of these derivatives. They have claimed that a disparity must be allowed between words which are semantically closest to such derivatives and respective morphological bases. The morphological theories presented by these authors in their recent publications differ in a number of points. Nevertheless, these theories share the basic premise that the study of the structural aspect of word-formation processes (so called "lexical syntax") should be separated from the study of the semantics of derived words. Consequently, the rules of word structure (WSRs) which operate within the lexical component of generative grammar refer only to morphological properties of derivatives and their bases (in particular, to category types, such as Word, Stem, Root). These rules are context-free and very general: Williams (1981) employs five WSRs whereas

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Lieber (1981) posits only one lexical rewrite rule. Analogically to Chomsky's (1965) Phrase Structure Rules, Word Structure Rules generate the set of possible morphological structures in English, i.e. unlabelled trees into which lexical items are subsequently inserted subject to their subcategorization restrictions. The analysis of semantic well-formedness and predistable semantic information of derived words is performed in the semantic component (and not in the morphological one, as in Aronoff (1976)). The assumption of semantic compositionality of derivatives is radically constrained: the meaning of a regularly formed lexeme is not expected to be always a function of the semantic readings of its derivational base and the attached affix. Consequently, in the theoretical approach in question there is no direct correspondence between morphological and semantic structure of derivatives.

I intend to show below, in section 2 of the present paper, that the arguments adduced by the proponents of word-structure morphologies in favour of the separation of semantic and formal bases of derived words are far from convincing. In section 3 I will use Polish and English data to point out some substantial drawbacks of the analyses carried out within the framework sof (Lieber (1981), Selkirk (1982) or Williams (1981). Conclusions stemming from these sections will be summarized in section 4. I shall not attempt to arrive at an ultimate decision whether the recognition of conflicting semantic and morphological structures of derivatives and the independence of lexical syntax and lexical semantics should be on principle prohibited in generative grammar or not. Such an issue can be settled only in a comprehensive study.

Before proceeding to the tasks delineated above, let me very briefly contrast the noncompositional generative theory of word structure outlined in Lieber (1981), Selkirk (1982) and Williams (1981) with some earlier morphological models.

Aronoff (1976) formulated rules of word formation (WFRs) as operations which attach affixes to derivational bases and specify both morphological and semantic properties of derived words. Thus, the sameness of the morphological and the semantic base[1] of each derivative is presupposed in his approach.

The interdependence of the structural and the semantic aspect of word-formation processes is implicit also in the assumptions of Slavonic structural linguistics. According to Grzegorczykowa and Puzynina, a morphologically complex word must meet two criteria in order to be regarded as a derivative. First, its meaning must be derivable from the meaning of another lexeme, treated as the derivational base. Second, the inflectional stem of the base must occur in its full form, clipped version or an allomorphic variant as the structural constituent of the derived word. Semantic criteria are decisive in determining derivational relations between lexemes (see Grzegorczykowa et al. (1984:307 ff.), Grzegorczykowa (1979:15)). The Polish word *partyzantka* 'guerilla war', for instance, reveals affinity both to the agent noun *partyzant* 'guerilla' and to the relational adjective *partyzancki* 'guerilla', derived from the latter noun. At first sight, it seems proper to regard *partyzant* as the derivational base of *partyzantka* since these two lexemes differ formally only in the presence of the suffix *-ka*. In comparison, the alternative derivation of *partyzantka* 'guerilla war' from the adjective *partyzancki* is more complex: it involves the attachment of the suffix *-ka*, the truncation of the adjectival suffix *-ski* and /t/~/s/ stem allomorphy. Nevertheless, Puzynina and Grzegorczykowa resolve on the latter mode of deriving *partyzantka* 'guerilla war' because the semantic paraphrase of this derivative in which the lexeme *partyzancki* is employed is simpler and more adequate than the paraphrase with the word *partyzant*.

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[1] I use here the term "semantic base" to denote the lexeme which is semantically closest to a particular derivative and by reference to which the meaning of the derived formation can be explained. I reserve the term "morphological (formal) base" to refer to the lexeme (strictly speaking, to the stem) on which an appropriate morphological operation (e.g. affixation) is performed. Normally, the same lexeme functions as the semantic and the formal base of any derivative and both these roles are implicit in the commonly used term "derivational base". However, the dinstinction between the morphological and the semantic base of a derivative enables me to speak about the formal and the semantic aspect of word-formation processes separately.

2. THE WEAKNESS OF THE JUSTIFICATION FOR THE ASSYMETRY OF SEMANTIC AND MORPHOLOGICAL STRUCTURES

2.1. In contrast to the above-mentioned Slavonic morphologists, E. Selkirk, E. Williams and (to a lesser degree) R. Lieber give priority to formal considerations over semantic ones in their word-formation analyses. When postulating a lack of correspondence between semantic and morphological bases of certain derivatives, these linguists refer first and foremost to the principles of the formal organization of the lexical component in generative grammar. They want to get rid of the counterexamples to the Affix Ordering Generalization (AOG).

The AOG, formulated first in Siegel (1974), forbids derivational stress-determining (Class I) affixes in English (e.g. *-ic*, *-ian*, *-ity*) to attach outside stress-neutral (Class II) affixes (*un-*, *-less*, *-ness* etc.) and outside compounds. Therefore, Lieber, Selkirk and Williams propose asymmetric morphological and semantic structures for the complex lexemes *transformational grammarian*, *set theoretic* and *ungrammaticality*.[2] These formations exhibit the closest se-

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Selkirk (1982) allows some affixes, among them *un-* and *re-*, to belong both to Class I and II morphemes, Given such an assumption, *reeducation* and *ungrammaticality* can be derived from *reeducate* and *ungrammatical* with no violation of the AOG since *re-* and *un-* function in these formations as Class I elements. In contrast, the same prefixes are analysed as Class II formatives whenever they appear "outside" other Class II affixes mantic relatedness to ***transformational grammar, set theory*** and ***ungrammatical***, respectively. However, they are assumed to be formed from ***grammarian***, *theoretic* and *grammaticality* because such morphological derivations do not violate the AOG.

A stronger version of the ordering hypothesis is advocated in Williams (1981). He claims that all operations of affixation (both derivational and inflectional) precede the processes of compounding.[3] Consequently, he treats the formations *sky-blueish*, *headstrongness*, *hard-heartedness* (commonly included among affixal derivatives, e.g. in Marchand (1969)) as compounds whose right-hand constituents may not occur as independent lexemes, i.e. ?*strongness*, ?*heartedness*. Furthermore, inflectional forms of compounds are analysed in his paper as derived from inflectional forms of the head constituents of these compounds. The exemplary derivations of the complex lexemes *ungrammaticality*, *headstrongness*, and the past tense form of the compound verb *whitewash*, carried out within the framework of Williams (1981), are shown below:[4]

(1) a. WSRs: word → stem
stem → affix stem
stem → root
root → root affix
the resulting structure: affix (root affix)
lexical insertion: *un-*, *grammatical*, *-ity*

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or compounds, e.g. in the case of *unfearful* and *re-undercu*. Unfortunately, the recognition of double class affixes forces Selkirk to regard distributional properties as the only salient difference between Class I and Class II elements. To explain the sensitivity of some phonological rules to morphological structure of words, Selkirk (1982:102) resorts to the use of diacritics associated with particular morphemes. Thus, the nasal consonant of the Class I prefix *in-* assimilates to the following coronal obstruent but, when belonging to another Class I prefix (i.e. *un-*), the same consonant remains unchanged: compare *illogical* and *unlearnability*. Such a solution is hardly revealing.

[3] Selkirk (1982) assumes that derivational Class II affixes and inflectional endings can appear both "inside" and "outside" compounds, hence within her model of word formation the derivatives *sky-blueish*, *pickpockethood*, *parks commisioner* are treated as perfectly regular lexemes.

[4] Rules in (1) should be read as follows: "stem dominates (i.e. can be analysed as consisting of) Affix plus another Stem", "Word dominates Stem", "Stem dominates Root" etc., where Word, Stem and Root stand for dinstinct category levels. The notation used in word-structure morphologies should not be confused with the notation employed by Aronoff (1976). The rule of negative *un-* attachment in English is formulated in Aronoff (1976 : 63) as:

/i/ $[X]_{Adj} \rightarrow [un\#[X]_{Adj}]_{Adj}$
semantics /roughly/: $un\#X = not\ X$

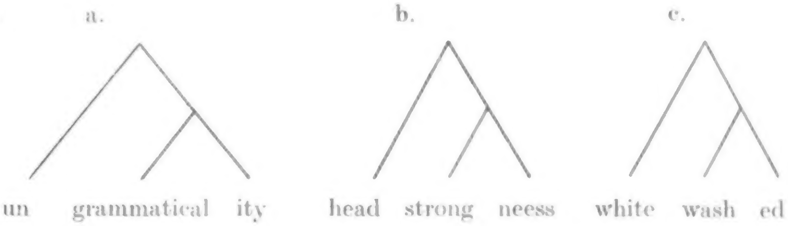
and can be read as: "X_A changes into $[un\#[X]_A]_A$ with the semantic interpretation "not X" as a result of *un-* affixation". Thus, the base of derivation is given to the left, and the resulting complex lexeme to the right of the arrow.

b. WSRs: word → word word
word → stem
stem → stem affix
the resulting structure: stem (stem affix)
lexical insertion: *head*, *strong*, *-ness*

c. WSRs: word → word word
word → stem
stem → stem affix
the resulting structure: stem (stem affix)
Lexical insertion: *white*, *wash*, *-ed*

The unlabelled trees assigned to the morphological structures generated in (1) are represented in (2):

(2)



(2c)=Williams's (1981:265) (51b).

To provide a morphological link between *ungrammaticality*, *headstrongness*, *whitewashed* and their semantic bases (i.e. *ungrammatical*, *headstrong*, *whitewash*) Williams (1981 : 261) suggests the following definition of lexical relatedness:

(3) "X can be *related* to Y if X and Y differ (footnote omitted-B.P.) only in a head position or in the nonhead position".

The head of a complex word is defined as that constituent which has the same morphological properties as the whole lexemes. The head usually occupies the right-hand position in an English word (there are very few exceptions, e.g. the verbalizing prefix *en-*). The term "nonhead" refers to the highest left branch of a word. The difference in the head position mentioned in (3) encompasses the cases when X has nothing in the position in which Y has a head — this is the exact distinction between *ungrammatical* and *ungrammaticality*.

The model of morphology explicated in Williams (1981) is in a number of respects laudable. Employing only the general rules of root affixation, stem affiation and compounding and making some necessary theoretical assumptions, the author manages to account for the distribution of the majority of English affixes.

Nevertheless, the veracity of his main argument in favour of introducing asymmetric morphological and semantic structures, namely the necessity to get rid of "relatedness paradoxes", is questionable. Consider the following data:

(4) a. stress in *-ation*, *-ity*, *-ic* and *-ette* derivatives:
-ation: óccupy — occupátion, símplify — simplificátion, pércolate — percolátion
-ity: fértile — fertílity, vítal — vitálity, áctive — actívity,
-ic: sýllable — syllábic, hístory — históric, héro — heróic,
-ette: úsher — usherétte, bánner — bannerétte, sérmon — sermonétte

b. *-ation*, *-ity*, *-ic* in concatenations with Class I morphemes:
-ation: education — educational, examination — examinational, foundation — foundationary,
-ity: capacity — capacitate, debility — debilitate, utility — utilitarian, uniformity — uniformitarian,
-ic: dramatic — dramatical, problematic — problematical, authomatic — authomaticity, syllabic — syllabicity

(5) a. stress in formations terminating in *-ize*, *-able*, *-ism* (*-ist*) *-er*, or beggining with *de-*, *re-*, *dis-*:
-ize: módern — módernize, vélar — vélarize,
-able: retriéve — retriévable, pérish — périshable,
-ism (-st): nátional — nátionalism (nátionalist), matérial — matérialism (matérialist)
-er: suspénd — suspénder, cárry — cárrier,
de-: éscalate — de-éscalate, ódorize — deódorize,
re-: décorate — redécorate, órganize, — reórganize,
dis-: appróve — disappróve, sátisfy — dissátisfy.

b. the affixes *-ize*, *-able*, *-ism* (*-ist*) *-er*, *de-*, *re-* and *dis-* in concatenations with Class II morphemes:
-ize: computer — computerize, container — containerize,
-able: analyze — analyzable, reset — resettable, prepay -prepayable,
-ism (*-ist*): reporter — reporterism, New Yorker — New Yorkerism,
-er: colonize — ćolonizer, catholicize — catholicizer,
de-: colonize — decolonize, odorize — deodorize,
re-: brutalize — rebrutalize, organize — reorganize,
dis-: harmonize — disharmonize, respectable — disrespectable.

(6) Class I affixes intermingled with Class II affixes:
-ize+*-ation*: familiarize — familiarization, hospitalize — hospitalization, neutralize — neutralization,

-able+*-ity*: acceptable — acceptability, desirable — desirability, derivable — derivability, lovable — lovability,

-ism (*-ist*)+*-ic*: anarchism (anarchist) — anarchistic, socialism (socialist) socialistic, enthusiasm (ethusiast) — enthusiastic,

-er+*-ette*: farmer — farmerette, spinner — spinnerette, sleeper — sleeperette,

de-+*-ation*: dehumidify — dehumidification, de-escalate — de-escalation, devitrify — devitrification,

re-+*-ation*: remodify — remodification, re-educate — re-education,

dis-+*-ity* or *-ation*: discontinue — discontinuity, disqualify — disqualification, dissatisfy — dissatisfaction.

The suffixes *-ation*, *-ity*, *-ic*, *-ette* exhibit both phonological and morphological properties of Class I affixes. First, they influence the placement of the main stress in derivatives (see 4a). Second, they can precede other Class I affixes (namely *-al*, *-ary*, *-ate*, *-arian* etc.) in concatenations of formatives. (I have given no examples for *-ette* since *-ette* derivatives do not frequently function as derivational bases). The suffixes *-ize*, *-able*, *-ism*, *-ist*, *-er* and the prefixes *de-*, *re-*, *dis-* behave like Class II morphemes: they are stress-neutral (cf. 5a) and can be tacked on "outside" Class II elements (see 5b). The AOG prohibits Class I affixes from attaching to words produced as a result of Class II affixation, however, the internal structure of the formations in (6) violates the latter principle. Needless to say, the derivational patterns exemplified in (6) are very productive (with the exception of the type *-erette*). Therefore, Aronoff and Sridhar in their 1987 paper conclude that there is no level ordering in English word formation. Moreover, Guerssel (1983) has presented an outline of a morphological theory of English in which morphological processes are not extrinsically ordered. In his model, word-formation rules (termed Lexicomps) apply whenever their structural description is satisfied. Affixes are divided into two categories: those whose attachment is triggered off by the presence of specific morphemes or by the nonderived status of potential bases and those which are subcategorized for Words (i.e. outputs of Lexicomps). This information is incorporated in the lexical entry of each affix. If a given affix attaches productively to the words of the form XAf_y, then Af_y is mentioned in the subcategorization frame of the affix in question as its contextual argument.[5] The suffix *-ation*, instance, selects *-ate* and *-ize* as its arguments.

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[5] It is possible within the framework of Guerssel (1983) to account for the occurrence of so-called "recursive derivations" involving Class I and Clas sII affixes, for instance: Class II *-ation*, *-ize* and Class I *-al* (see *organize* → *organization* → *organizational* → *organizationalize* → *organizationalization* etc.). The suffix *-ize* appears in the lexical entry of *-ation* as its contextual argument. *-al* selects *-ation* and, in turn, functions as the argument of *-ize* (see Guerssel (1983:241)).

Having discussed the AOG, let us now examine other pieces of evidence hitherto produced to corroborate the lack of correspondence between morphological and semantic bases of derivatives.

2.2. Pesetsky (1979), quoted in Lieber (1981) and Williams (1981), advances the claim that in Russian inflectional endings must be processed by cyclic phonological rules earlier than derivational prefixes, otherwise the interaction of the phonological rules of yer lowering and yer deletion produces incorrect results. Within the framework of lexical phonology espoused in Pesetsky's monograph, the output of each word-formation operation is submitted within the lexicon to the application of phonological rules. It follows that prefixation must be ordered after inflectional suffixation. Such a morphological derivation is in disagreement with semantic considerations: the semantic reading of inflectional forms of prefixed formations is not predictable from the meaning of corresponding unprefixed inflectional forms. One and the same prefix attached to different verb forms in Russian "adds" different shades of meaning. Compare, in this respect, past tense forms of some unprefixed verbs and their equivalents containing the prefix *pere-*:

(7) *bežal* '(he) ran away' — *perebežal* (ulicu) '(he) ran across (the street)'
stroil '(he) built' — *perestroil* '(he) rebuilt'
staralsja '(he) tried' — *perestaralsja* '(he) overdid it'
pisal '(he) wrote' — *perepisal* '(he) copied'.

On the other hand, the modification of the meaning of any verb stem caused by the addition of inflectional suffixes is totally regular: *-l* always signals 3rd person sing. masc. in the past tense, *-li* marks 3rd person plural etc. Thus, the meaning of an inflectional prefixed verb form is a simple function of the semantic reading of the corresponding prefixed stem.

Pesetsky's suggestion of processing prefixes on the last phonological cycle has been adopted in Rubach (1981) with regard to Polish data. The phonological behaviour of yers (i.e. lax high vowels) in Polish is similar to the behaviour of Russian yers. The cyclic rule of Lower, posited in Rubach (1981), changes a yer into a mid front vowel on front of another yer. Postcyclic Yer Deletion erases all yers which have not been lowered.[6] Compare two alternative phonological derivations of the prefixed Polish adjective *bezdenny* 'bottomless':

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[6] Strictly speaking, in Rubach's phonological system the rule of Lower changes only the height of vowels and does not influence the quality of the feature back. Thus, front yers /i/ are regularly lowered to [e] whereas back (non-palatalizing) yers /i/ are changed into mid back vowels /γ/ which are subsequently spelled as [e] by postcydlic Vowel Spell-out Rule. I have omitted this intermediate stage in the derivations in (4) in order to simplify the present discussion. Let us add that an alternative formulation of the rules of Lower

(8)

Underlying Representation (UR)	a. [[[bezi [din]] ĭn]i]	b. [bezi [[[din]ĭn]i]]
Cycle 2	bezi+din	din+ĭn
Lower	e	e
Cycle 3	beze+din+ĭn	den+ĭn+i
Lower	e	
Cycle 4	beze+den+ĭn+i	bezi+den+ĭn+i
Lower		
Postcyclic Yer Del.	ø	ø ø
Phonetic representation	*[bezedenni]	[bezdenni]

When the prefix *bez/e/-* is introduced into the phonological derivation of *bezdenny* at an earlier stage than the inflectional ending -y, the application of Lower and Yer Deletion yields the incorrect phonetic representation *[bezedenni] (see 8a). Therefore Rubach (1981:165) concludes that "the prefix cycle is (...) truly a word level rather than a morpheme cycle" and it should occur at the very end of phonological derivation. The need for recognizing the prefix cycle as the last one in morphological derivation is implicit in the model of cyclic phonology presented in Rubach (1981): internal bracketing to which cyclic phonological rules are sensitive is supposed to mirror the application of WFRs.

The undesirability of ordering prefixation processes in Polish after inflectional suffixation is discussed in Nykiel-Herbert (1984:32 ff.). She resolves the conflict between morphosemantic structure of prefixed formations and their internal structure required by cyclic phonological rules by reanalysing one of the cyclic rules postulated for Polish (so called Derived Imperfective Tensing) as a morphological operation. Another solution to this conflict is proposed in Rubach (1984). He assumes that words receive cyclic brackets at morphological boundaries only at the end of the word-formation component. Due to a special convention proposed for Polish, prefixes are bracketed "outside" all suffixes. Rubach (1984) considers also the possibility of reconciling the word-level status of prefixes with the requirements of morphological derivation in the model of lexical phonology. To achieve this aim, phonological rules must be made sensitive to prosodic structure. Prefixed formations will be analysed as phonological compounds. While the majority of cyclic rules will be prohibited from operating in the domain larger than a phonological word

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and Yer Deletion in Polish has also been suggested. In the framework of non-cyclic phonology espoused in Gussmann (1980), Lower and Yer Deletion are collapsed into a single rule.

(so called "mot"). Lower will apply first to individual mots but on the last phonological cycle it will operate within the domain of "mot prime", i.e. phonological compound. Consequently, prefixes will be processed together with stems only at the end of derivation, even though WFRs introducing prefixes will apply quite early. Since the behaviour of rules of Lower in Polish and in Russian is similar, Rubach's proposal can be implemented in the Russian phonological system.

Thus, there seems to be no need to postulate morphological structure of prefixed lexemes incompatible with their semantic interpretation, as has been done in Pesetsky (1979).

2.3. Pesetsky intends to show that, apart from strictly phonological evidence, there are semantic considerations indicating frequent occurrence of non-isomorphy between morphological and semantic structure of derived lexemes. in Russian. He juxtaposes the Russian formations *dušitel* ''strangler', *mučitel'* 'torturer', *mučitel'skij* 'of a torturer', *dušitel'skij* 'of a strangler', where the suffix *-el'* has a clear agentive interpretation, with the adjectives *dušitel'nij* 'suffocating', *mučitel'nij* 'agonizing' in which the suffix *-el'* appears to have lost its meaning. While formally derivable from corresponding agentive nouns, the latter adjectives are semantically closest to the verbs *dušit'* 'to strangle' and *mučit'* 'to torture'. Pesetsky concludes that the adjectival suffix *-in-* in Russian has the effect of "wiping out" the meaning of any suffix that intervenes between it and the root[7].

His analysis, however, seems to be misguided. The phonetically identical sequences *-el'-* in *dušitel'* and *dušitel'nij* do not have to represent the same morpheme. Švedova (1980:293) assumes that the adjectives of the type *obščitel'nij* 'sociable', *čuvstvitel'nij* 'sensitive, intense', *osvežitel'nij* 'refreshing' are formed from the corresponding verbs *obžčat'sja* 'to enjoy', 'social life', *čuvstvovat'* 'to feel', *osvežat'* 'to refresh' by means of a complex suffix *-tel'nij*/ /*-itel'nij*. Observe that the adjective *čuvstvitel'nij* has no related agentive noun **čuvstvitel'* from which it could be derived. If further phonological and morphological analyses pointed to the existence of some kind of a boundary separating *-tel'* and *-nij* in these formations, *-nij* could be regarded as the adjectivalizing affix proper and *-tel'* as its intermorphic extension. Thus, *-tel'*/*-el'* appears to be an independent nominalizing suffix in *dušitel'* and an intermorph in *dušitel'nij*. Intermorphis are devoid of an independent meaning but they can fulfill some semantic function (see Grzegorczykowa et al. (1984: :516 ff.), also Szymanek (1985)). In Polish, for instance, both *-ka* and *-arka* are productive at present and form deverbal and denominal Nomina

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[7] Since Pesetsky's (1979) maniscript was not available to me, I report his analysis of Russian adjectives in *-itel'nij* after Lieber (1981).

Instrumenti. The complex formative *-arka* is more specialized, though. It attaches primarily to verbs and its derivatives characteristically denote complex and power-driven machines. Compare a couple of formations terminating in *-arka* and corresponding *-ka* derivatives related to the same verb stem: ***skrobarka*** 'machine for smoothing metal' vs. ***skrobka*** 'tool for smoothing, wood metal etc. *zamiatarka* 'motor sweeper' vs. *zmiotka* 'small brush'; *zatykarka* 'taphole gun' vs. *zatyczka* 'plug, stopper'. Apparently interfixes such as *-ar-* in *-arka* cannot be "left out" in semantic analyses of complex words.

Summing up the discussion of the arguments given in Lieber (1981), Selkirk (1982) and Williams (1981) (and in Pesetsky's monograph on which the latter authors report) to justify the introduction of conflicting semantic and morphological analyses of derivatives, it can be asserted that none of these arguments is fully tenable.

In the next section of the present paper I will point out a few other reasons to doubt the soundness of the approach adopted by Lieber, Williams and Selkirk.

3. DRAWBACKS OF LEXICAL STRUCTURE MORPHOLOGIES

3.1. The immediate and most striking undesirable consequence of the disparity between morphological and semantic bases of derivatives postulated in Lieber (1981) and Williams (1981) is the necessity to change in an ad hoc way the subcategorization of affixes (i.e. the specification of the sort of bases affixes can attach to). For instance, the negative prefix *un-* in English is very productive with adjectival and participial bases. It rarely attaches to nouns; Marchand (1969:204) quotes *unpatriotism*, *unfriend*, *unperson* and the like as isolated examples. Contrary to these observations, the adherents of the Affix Ordering Generalization who include *un-* among Class II affixes are forced to treat lexemes coined from negative adjectives by means of *-ity* affixation (e.g. *ungrammaticality*) as denominal *un-* derivatives.[8]

3.2. Serious morphological objections may be raised against the idea of deriving inflectional forms of compounds from inflectional forms of relevant head constituents (see Williams (1981)). First, such an analysis fails to show the unity of inflectional paradigms of compounds. Each inflectional form of the compound verb *whitewash* can be related only in an indirect manner to the remaining members of the same conjugational paradigm by means of definition (3). Second, the segmentation of the past tense form *whitewashed* into [white [[washed]] (see Figure 2c) implies that compounds have the same inflectional

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[8] This drawback of Williams's (1981) approach has been pointed out in Strauss (1982).

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properties as their heads. This happens to be true in English for the majority of compounds. There is still a notable group of exceptions, namely the complex lexemes included in (9):

(9) a. $[\text{Verb}+\text{Prep}]_{\text{Noun}}$:
bury-in, drift-in, chisel-in, kneel-in, lead-in, ride-in, pray-in, study-in, teach-in, think-in, go-between, show-down, flyover, pushover, lean-to, talk-to, dustup, press-up, play-with;

b. $[\text{Verb}+\text{Prep}]_{\text{Adj}}$:
see-through (blouse), tow-away (zone), wrap-around (skirt);

c. $[\text{Verb}+\text{Verb}]_{\text{Adj}}$:
go-go (dancer), pass-fail (test), push-pull (writing exercise), stop-go (economics), stop-start (situation).

The occurrence of all the formations listed in (9a) in nominal function has been attested in Adams (1973) or Lehnert (1971). The majority of the attributive complex adjectives in (9b) and (9c) are quoted after Bauer (1983:211, 212). Bauer (1983) observes that the derivational types exemplified in (9a) and (9b) are very productive, in particular compound nouns with a second element *-in*. Verb+Verb adjectives are not numerous, however, Bauer regards this class of lexemes as new and growing. All the formations given in (9) can be regarded as exocentric (headless) because the syntactic category of each compounds does not correspond to the category of any of its constituents.

The only way to account for the existence of headless complex lexemes within the framework of lexical structure morphologies is to derive such words through conversion. Williams (1981:250) explicitly states that WSRs generating headless formations must be nonbranching, i.e. of the form X → Y (there may be only one element to the right of the arrow). He posits rule (10) (his rule (19)) to derive nouns composed of verbs and prepositional or adverbial particles.

(10) N → VP

Observe, however, that the verb-particle sequences underlying the compounds in (9a) cannot be safely regarded as full verb phrases since they usually must be complemented with nominal objects. Note the ungrammaticality of the sentences **He brued his hand in…*, **This house leans to.*, **He talked to…* Selkirk (1982 : 26) proposes analysing such Verb+particle concatenations as compound verbs and converting them into adjectives or nouns by means of rules (11):

(11) a. N → V   b. A → V

The latter solution is plausible in the case of lexemes zeroderived from corresponding phrasal verbs, e.g. *check up*$_{\text{N}}$, *show-off*$_{\text{N}}$, *worn out*$_{\text{Adj}}$. Phrasal verbs tend to function semantically and syntactically similarly to complex verbs such as *overcome*, *outlive*. Very often the semantic reading of a phrasal verb cannot be inferred from the meanings of its constituents: consider the verbs *put up*, *do in*, *let down*. Moreover, these constituents reveal a conspicuous syntactic cohesion: they can be separated only by a nominal or pronominal object and an intensifier, as in the sentences *Look it up*, *Go right on*!.

The analysis of prepositional verbs, e.g. *look at*, *talk to*, *call on*, as complex lexemes seems much less warranted. In the case of such Verb+Particle sequences, the preposition belongs more to the noun phrase that follows it than to the verb. Unless in *wh*- questions, passive, relative and infinitive clauses, such a preposition cannot be placed after its object, e.g. **I looked the children after*. The constituents of a prepositional verb may be separated by an intervening adverb (see Quirk et al. (1972)): *They called early on the man*.

All the formations listed in (9ab) are lexically related to prepositional verbs which, as I have demonstrated above, should not be included amohg compound verbs. Consequently, the nouns and adjectives in (9ab) cannot be regarded as zero-derivatives. They are compounds proper. Similarly, it does not seem appropriate to derive the adjectives in (9c) from hypothetical compound verbs by means of conversion. Bauer (1983) and Marchand (1969) note that verbs composed of two simple verbs are very uncommon in English.

The existence of headless compounds, such as in (9), disproves Williams's (1981) claim that inflectional forms of compounds are derived from inflectional forms of their right-hand constituents. Morphological bases of inflected compounds cannot differ from respective semantic bases.

3.3. Let us now turn our attention to some other handicaps of the analyses carried out by Williams, Selkirk and Lieber. These drawbacks do not stem directly from the procedure of positing conflicting morphological and semantic bases of derivatives but rather from the separation of lexical syntax and lexical semantics. Nevertheless, they are worth discussing here since the independence of the study of morphological and semantic aspects of word-formation processes is prerequisite to the separation of morphological and semantic bases of derived lexemes.

It is generally acknowledged that word-formation operations are sensitive to semantic properties of potential derivational bases. The reversative prefix *un*- in English attaches only to verbs denoting an action the result of which may be undone, e.g. *tie*, *lock*, *button* (see Marchand (1969:205)). The nominalizing suffix *-al* is tacked on to dynamic verbs (hence *refusal*, *revival*) and the adjectival suffix *-ful* favours abstract nouns such as *success*, *use* (cf. Quirk et al. (1972)). A highly productive process of diminutivization in Polish does not affect abstract nouns (see Malicka-Kleparska (1983)). Within the framework of a lexical structure morphology the constraints of this sort cannot be encoded into rules of word structure which refer only to morphological features of bases and derived lexemes. Consequently, the ill-formed words **unkill*, **unlove*, **consistal* must be regularly generated by WSRs and can be filtered out as deviant only in the semantic component.

3.4. Once semantic information is excluded from morphological analyses, it is also difficult to differentiate in a principled manner between two types of complex words: fully motivated words (i.e. derivatives proper) and unmotivated but multimorphemic lexemes. Fully motivated words possess easily recognizable derivational bases which occur as independent lexemes and whose phonological shape, morphological and semantic properties are inherited by derivatives. Unmotivated complex words exhibit internal morphological structure but lack potential derivational bases: word-formation affixes identifiable in such lexemes are attached to bound roots which cannot be regarded as truncated versions of independently occurring words (consider the English lexemes *ornament*, *possible*, *pudic* or the Polish word *malina* 'raspberry'). The distinction between motivated and unmotivated lexemes is consistently drawn by many structural linguists (see Bogusławski (1959), Dokulil (1962), Grzegorczykowa et al. (1984), Marchand (1969), Švedova (1980)) and quite a few generative grammarians (e.g. Aronoff (1976), Booij (1977), Guerssel (1983), Laskowski (1981), Malicka-Kleparska (1983)). The above-mentioned generative morphologists usually provide fully motivated words with nested structure which shows derivational history of a particular formation, as in the case of *teachability*: $[[[\text{teach}]_V \# \text{able}]_{Adj} + \text{ity}]_N$. Unmotivated complex lexemes have no labelled bracketing (observe that bound roots *orna-*, *poss-*, *pud-* cannot be justifiably assigned to any syntactic category). Their internal complexity is signalled exclusively by the use of morpho-phonological boundaries which separate constituent morphemes. The non-derived word *possible* is represented as $[\text{poss} + \text{ible}]_{Adj}$. Fully motivated and unmotivated multimorphemic strings differ also with respect to their semantic interpretation. The non-idiosyncratic meaning of the former may be defined as a function of the meaning of derivational bases and affixes employed. The only information predictable in the case of the latter type of complex words is usually their syntactic category specified by the affix.[9] For instance, *possible* is immediately recognized as an adjective

In the approach adopted by Williams (1981) and Selkirk (1982) derivational analysis of lexemes is tantamount to their decomposition into morphemes.

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[9] Affixes identifiable in unmotivated complex lexemes may also carry some semantic information. For example, the prefix *trans-* in *transfer*, *transmit*, *transport*, *translate* suggests some kind of change of the corresponding object (usually a change of place). The prefix *trans-* exhibits the same semantic function in fully motivated lexemes, e.g. *translocate*, *transform*, *transnature*.

This is a natural result of restricting the task of lexical syntax to the study of formal relationships between words. No attention is given to the question whether analysed morphemes function as derivational affixes or whether they can be merely identified as constituent parts of nonderived words. Each root is enclosed within a pair of brackets, hence the internal structure of *ornament* is identical to the structure of *movement*, viz. $[[\text{orna}]_V\text{ment}]_N$ and $[[\text{move}]_V\text{ment}]_N$. The Latinate verbs *conduct, subscribe, expel* are formed by by prefixation from the roots *-duct, -scribe, -pel* which are devoid of any independent meaning.

Lieber (1981) lists such verbs in the lexicon as nonderived words which are segmentable into morphemes. Thus, some distinction between motivated and unmotivated complex lexemes is implicit in her morphological system. Still, the existence of this distinction cannot be inferred from other theoretical assumptions made in her monograph. Aronoff's model of word formation is in this respect superior. Since he assumes the operation of word-formation affixation to be simultaneous with the specification of derived meaning, he permits derived words to be formed only from fully meaningful units. The latter — in his interpretation — cannot be morphemes but words. It automatically follows that a multimorphemic formation is not treated as a derivative unless there exists a word which can function as its base.

3.5. Last but not least, let us remark that a separation of lexical syntax and lexical semantics implies some undesirable complication of the semantic interpretation of derived words.

The proponents of lexical structure morphologies give little attention to the organization of the semantic component of generative grammar. Lieber (1981: :114) asserts that "we must have semantic projection rules building compositional meanings, special rules mapping idiosyncratic meanings onto otherwise regularly derived forms like *transmission*, and a variety of other semantic rules which ignore lexical structure entirely". Selkirk (1982:111 ff.) suggests that the rules of the last type allow the structures ${}_A[{}_N[\text{set}]_N\ {}_A[\text{theoret-ic}]_A]_A$ and ${}_A[{}_N[\text{noun phrase}]_N\ {}_A[\text{cycl-ic}]_A]_A$ derived in accordance with the AOG, to be interpreted semantically according to the bracketing ${}_A[{}_N[\text{set theor/et/}]_N\text{ic}]_A$ and ${}_A[{}_N[\text{noun phrase cycle}]_N\text{ ic}]_A$. A problem with these rules is that neither Lieber (1981) nor Selkirk (1982) explains how they should be formalized and how they can interact with semantic projection rules. A question arises whether a single string of morphemes generated by some WSR can be assigned both compositional and noncompositional semantic interpretation. Let us consider the class of English adjectives containing the prefix *anti-*, e.g. *antipoetic, antitypical, anticyclonic, antichristian, antinovelistic*. Since *anti-* attaches both to nouns and adjectives, the formations in questions are traditionally recognized as admitting of double morphological analysis. They may be derived from corresponding nouns *antipoetry*, *antitype*, *anticyclone*, *antichrist*, *antinovelist* by means of the suffixes *-ic*, *-/ic/al*, *-ian* or formed from the adjectives *poetic*, *typical*, *cyclonic*, *christian*, *novelistic* by means of *anti-* prefixation. When analysed as denominal formations, *anti-* adjectives are expected to mean 'pertaining to (antipoetry, anticyclone, etc.)'. On the other hand, the semantic reading of these lexemes predictable in the case of their deadjectival analysis is 'opposed to, being the opposite of (poetry, cyclone etc.)'. Actually, *antipoetic*, *anticyclonic*, *antichristian*, *antinovelistic* allow both semantic interpretations. Within the model espoused in Lieber (1981), Selkirk (1982) and Williams (1981) these complex adjectives may be derived only by means of *anti-* prefixation. This is so because of the requirements of the AOG: *anti-* belongs to Class II prefixes whereas *-ic*, *-al* and *-ian* are Class I suffixes. Should the application of semantic rules building noncompositional meanings be optional and, consequently, should semantic ambiguity of multimorphemic lexemes be allowed in the theory of autonomous lexical semantics, the word *antipoetic* could be correctly provided with double semantic interpretation. The meaning 'being opposed to poetry' would be derived by projection rules in a compositional manner while the meaning 'pertaining to antipoetry' would be supplied by semantic rules which ignore morphological bracketing. However, such a solution is not welcome in the case of the adjectives *antitypical*, *anticlinal*, *anticlimactic*, *antilogarithmic*, *antithetical* which unambigously mean: 'pertaining to antitype, anticline, anticlimax etc.' These examples suggest that "special" rules of the semantic component should apply obligatorily whenever their structural description is met. Then, however, the double semantic interpretation of *antipoetic* and the like cannot be easily accounted for unless the existence of two strings [anti[[poet/ry/]ic]] is postulated. One of these strings must be diacritically marked as subject to (or exempt from) noncompositional semantic analysis. Needless to say, the use of diacritic marks is hardly attractive. and far less economic than the recognition of two homonymic lexemes *antipoetic* differing in their internal structure.[10]

In sum, it has been shown above that morphological and semantic analyses of derived words carried out within the framework of Lieber (1981), Selkirk (1982) or Williams (1981) suffer from some inadequancies. The latter result either directly from a recognition of conflicting semantic and morphological bases of complex lexemes or from the separation of lexical syntax and lexical semantics, prerequisite to the separation of semantic and morphological bases.

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[10] Similar problems arise within the framework of lexical structure morphologies when formations containing Class II prefixes *meta*, *pseudo-* and Class I suffixes *-ic*, *-al*, *Pseudomorphic*, *metaphysical* are related semantically to *pseudomorph*, *metaphysics* whereas *pseudo-archaic*, *meta-pneumonic* show affinity to *archaic*, *pneumonic*.

4. CONCLUSION

Let me recapitulate briefly the results of the investigations carried out in the present paper.

It has been demonstrated above that none of the authors who postulate incompatible semantic and morphological derivations of complex words gives adequate reasons for such a procedure. The main argument adduced in Selkirk (1982), Williams (1981) and Lieber (1981) in favour of distinct semantic and morphological bases of derivatives, namely the necessity to reanalyse formations whose internal morphology contradicts the Affix Ordering Generalization, is by no means convincing. As pointed out in Aronoff and Sridhar (to appear), the veracity of the latter ordering principle in English word formation may be questioned. It is also possible to invalidate Pesetsky's (1979) observation that, given the phonological behaviour of yers (i.e. lax high vowels) in Russian, a lack of parallelism between semantic and morphological structure of prefixed formations must be recognized. The conflict between semantic structure of these lexemes and their internal structure required by cyclic phonological rules disappears once the set of phonological rules in Russian is modified along the lines suggested for Polish in Nykiel-Herbert (1984) or Rubach (1984). Finally, the Russian adjectives in *-tel'nij/-itel'nij*, quoted by Pesetsky (1979) as semantically noncompositional lexemes, may be treated as perfectly regular derivatives containing interfixes.

The idea of autonomous syntax and semantics of words may be opposed not only on the grounds of insufficient evidence hitherto adduced in its favour. Such a theoretical assumption may complicate semantic and morphological analyses of lexemes. It may result in an ad hoc modification of subcategorization frames of affixes and difficulties in accounting for inflectional properties of headless compounds. Moreover, it may bring about the impossibility of stating semantic considerations constraints on bases of word-formation processes or the impossibility of differentiating in a principled manner between fully motivated and unmotivated lexemes.

The present paper cannot, however, offer a definite yes/no answer to the question whether the independence of lexical syntax from lexical semantics should be in principle disallowed within the framework of generative grammar. Structural studies of Czech, Polish and Russian morphology discuss comprehensively the phenomena of mutual and parallel motivation (see Grzegorczykowa and Puzynina (1979), Dokulil (1962), Švedova (1980)). These phenomena[11] exemplify asymmetry of semantic and formal relations between words, therefore they can be construed as a piece of evidence in favour of the separation of the study of formal and semantic complexity of derived words. Some cases of parallel motivation have been analysed in Aronoff (1976:118 ff.) on the basis of English data and in Malicka-Kleparska (1983) on the basis of Polish data. Both these linguists have come to the conclusion that formations exhibiting semantic and formal relatedness to more than one lexeme can be adequately described within the framework of generative morphology which adopts the assumptions of a unitary morphosemantic base of derivation.[12] Further research into the matter of the correspondance between the semantic reading and the internal morphology of lexemes is undoubtedly necessary. It may turn out that some word-formation processes (for example, instances of mutual motivation) can be accounted for better in an approach which separates semantic and morphological derivation of complex lexemes than in the framework of compositional generative theory of word formation. Nevertheless, the superiority of the former model can be claimed only if it manages to avoid the weaknesses of lexical structure morphologies pointed out in the present paper or if putative advantages of such a theory are shown to prevail over possible disadvantages.

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[11] The majority of generative linguists (with the exception of Jackendoff (1975)) share the assumption that WFRs are unidirectional and, in the case of affixal derivatives, state a dependence between a base of derivation and a derived lexeme. The latter should

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generally exhibit a greater formal and semantic complexity than its putative base. However, in the case of the morphological relationship termed "mutual motivation", two lexemes are undeniably lexically related but the direction of their semantic relatedness is unclear (e.g. *nationalism* — *nationalist*). When the independence of lexical semantics is postulated, rules of lexical semantics may differ from WSRs in being two-arrowed. It is also possible to instruct some rules of lexical semantics to show webs of intricate semantic connections between more than two words. This could solve the problem of parallel motivation, i.e. semantic and formal relatedness of a derived lexeme to two or more words which have less complex morphological structure and/or meaning. There would be one morphological process deriving *egoistic* but two alternative semantic bases of this lexeme i.e. *egoism* and *egoist*.

[12] Malicka-Kleparska (1983) shows that derivational relationship of a complex word to more than one lexeme (more basic in its semantics and form) may be encoded in the bracketed structure of such a derivative. She formulates a WFR deriving feminine Nomina Agentis in Polish from corresponding masculine agentive nouns, e.g. *znalazca* 'finder, masc.' → *znalazczyni* 'finder, fem.' Since *znalazca* is, in turn, derived from the verb *znaleźć* 'to find', the internal structure of the feminine Nomen Agentis *znalazczyni* takes the form of $[[[\text{znalaz}]_V + \text{c/a/}]_{[N,+\text{masc.}]} + \text{ini}]_{[N,-\text{masc.}]}$. As *znalazczyni* contains the stem and the meaning of the verb *znaleźć* 'to find', the latter "motivates" indirectly the former.

Aronoff (1976) takes the position that whenever a complex word permits several parallel derivations, evidence can be supplied to corroborate the undisputable priority and desirability of one of these derivations. He argues that the adjectives in *-istic* should be derived from corresponding nouns in *-ism* because the latter fall into the general class of bases of *-ic* attachment.

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ENGLISH VERBAL COMPLEMENTS, DUTCH-SPEAKING LEARNERS AND THE ROLE OF LENGTH: AN INVESTIGATION OF ERROR IN ONE AREA OF ENGLISH GRAMMAR

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Part 1

The aim of the present study is to discuss certain types of error which are commonly committed by speakers of Dutch mother-tongue in the production of English complement sentences. It should be clarified at the outset that our concern throughout is with students at university level who may be described as fairly advanced. None would have had less than four years instruction in English at secondary school, quite apart from that received as part of their university course. It is clear then that resistant or fossilizable errors form the underlying data on which the present research is based.

At this point we should discuss some of the syntactical and morphological factors which make the English complement system difficult for the Dutch speaking student. In purely contrastive terms, the main source of difficulty is posed by the existence of an extra structure, the V ING or gerund form which has no real equivalent in Dutch. While the student would thus be familiar with to — infinitive and that-clause which correspond to a certain extent to similar forms in his LI, he is faced, when learning English with the problem of manipulating a basically three-complement system. The problem does not end there, however, since through complicated processes of permutation, additions and deletions a variety of additional structures are yielded.[1] The following table exhibits the five main complement structures with which we will be concerned in the present study.

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[1] In the present study it should be stated that we subscribe to the view that complementation in English constitutes a system. While many traditional grammarians wrote as if this were not the case, an increasingly large body of research has arisen in the last

Table I.

1. Would you consider/spend*ing* a few days with me (gerund)
2. They failed/to arrive on time (infinitive)
3. They suggested/*that* we *should* take a bath. (that-clause)
4. They prevented/me *from* park*ing* may car (NP Prep. gerund)
5. The possibility/*of* gett*ing* an increasr (Prep. gerund)

At this point it will become immediately obvious that the structures are not of equal length. Now it should be stressed here that by *length* we are referring to bound or unbound morphemes as the basic units of length in a psycholinguistic context. (indicated by underlining in table) There is large body of evidence to support the view that functional morphemes have a different status in the context of language production from that of either syllables or individual words. In child language acquisition it has been found that long words as such do not present much in the way of a learning difficulty whereas morphologically complex entities do. This leads to the conclusion that the learner's basic problem resides in the task of organizing syntactic or semantic units (Ervin-Tripp 1971). Elsewhere, Epstein (1961) reported a study in which informants' performance in learning nonsense syllables without grammatical tags proved considerably easier than shorter sentences with. Similarly, Glanzer showed that nouns consisting of a nonsense word with a function word are learnt with greater difficulty than nouns consisting of a nonsense word and a content word (Glanzer 1962). It seems safe to assume from all this that there is an *absolute* difference in learnability and reproducability between content words and functors.[2]

The orientation of the present study stems from a test which was carried out in April of 1983. The testes numbered 105 and were all first year students at the Faculty of Applied Economics in Antwerp University. The object of the test was to find out which type of English verbal complement pattern would prove most difficult and the most potent source of error. The test consisted of two parts. The first section contained twenty- nine sentences for completion, the appropriate verb to be used for completing the sentence being placed at

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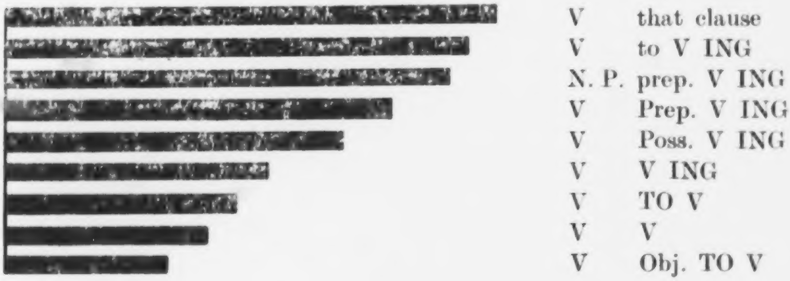
few years which clearly deomonstrates that the distribution of the complements is largely decided by the semantics of the main verb. In this regard see Menzel 1975; Bresnan 1979 and Horiguchi 1978.

[2] In this context it is also interesting to quote the example in Fodor, Bever&Garrett to the effect that when informants are aksed to recall sentences there is evidence of formal reduction to kernel sentences involving a sort of simplification. (Fodor, Bever and Garrett 1974:266).

the end of each sentence. in brackets. The second part of the test comprised the same sentences in Dutch, for translation into English. As before, the complement verb to be used was supplied at the end of the sentence in brackets. The students were given seven minutes in which to complete the test, this time-limit having been decided on the basis of some preliminary work involving the same test with different students. Because of the considerably greater effort required in the translation test fifteen minutes were allowed. In addition to the complement verb some other words which might have been expected to cause difficulty were translated. The testees were instructed to complete the tests as quickly as possible and with a minimum of reflection the object being to avoid excessive monitoring and elicit intuitive responses.

Table II reproduced below provides a histogram drawn up on the basis of both tests in order to show the relative order of difficulty experienced by the students.

Table II



N.B. While the translation test showed a greater swing in the direction of mother-tongue pull, no important difference in the overall order of difficulty could be observed.

At first glance, we observe that those constructions involving a gerund complement are quantitatively responsible for a greater proportion of error than those involving the infinitive, whether taken individually or collectively. An immediate conclusion might be that the facilitating effect of the mother tongue is overwhelming and that the acquisition of a structurally new form is consequently rendered more difficult. However, some caution must be exercised before making such a judgement. It so happens that the verb type where the largest proportion of error was reported was that requiring that-clause complementation. In the case of the three structures in question: "insist", "demand" and "suggest" the testees showed a pervasive preference for infinitival complements. It is clear that if they had opted for a more straightforward "translation" strategy fewer errors would have been produced.

The table which follows provides a breakdown of the results in the case of four verbs showing the number and type of mistakes which were committed SC stands for sentence completion and ST stands for sentence translation

Table III (see footnote)

1)	I insisted	immediately (he; leave)		
	Ik stond erop dat hij onmiddellijk vertrok			
	answers		SC	ST
	I insisted	*him to leave	34	22
		*him leaving	15	14
		on him leaving	5	6
		that the should leave	15	II
2)	He demanded	their identity cards (they; show)		
	Hij eiste dat ze hun identeitskaart zouden tonen			
he demanded		*them to show	82	59
		*them showing	12	11
		that they should show	1	7
3)	we are not used	Rugby (play)		
	We zijn het niet gewoon rugby te spelen			
	We are not used	*to play	47	36
		* playing	31	27
		to playing	29	I6
4)	The fog prevented	on time (we; arrive)		
	De mist belette ons op tijd aan te komen			
	The fog prevented	*us to arrive	37	55
		us arriving...	22	14
		us from arriving	5	I6

N.B. The author wishes to express his gratitude to his colleagues C. Braecke and J. Bruyndonx for their help in the preparation of tests involving items for translations.

While there can be little doubt that mother-tongue influence goes a large part of the way in explaining the main patterns obtained in the results, there remain a number of phenomena which transfer is unable to account for. How does one go about explaining its facilitating effect in the case of the infinitive but relative failure to facilitate in the case of that-clauses? How can explain the relative ease with which the EQUI (i.e. simple) gerund is produced but the considerable problems provided by other gerundive constructions? It is to questions such as this that we turn our attention in the second part of this article.

Part 2

Throughout this paper I adhere to the view that deep structure forms an interlevel between surface forms and what might be termed semantic representations. If this is correct, it then becomes axiomatic that the production of a sentence involves the construction of a representation of a sentence which corresponds to its deep structure tree. The computation involved in production and recognition of a sentence is the same to the extent that that the two relate to the same level of linguistic of linguistic description with, however, the important distinction that the information flow is different. As noted by Fodor, Bever & Garrett the production system cannot simply be a grammar. A completed standard grammar, competence, knowledge of the language etc. would provide a procedure for constructing a semantic representation related to a given deep structure tree. However, it would not provide any mechanism for constructing a surface structure corresponding to a deep structure representation. (Fodor, Bever & Garrett 1974).

One of the early minunderstandings in the aftermath of the Chomskyian revolution was to view grammatical models as a sort of programme. This tendency can be observed in the writings of such theorists as Selinker which viewed movements away from LI competence as a sort of transitional system underlying performance behaviour.

Indeed the act of producing a sentence in conptions of normal discourse, fast communication or in tests where the student is required to answer rapidly, rule out the possibility of lengthy reflection or monitoring (in the sense meant by Krashen). For this reason the knowledge of grammar sought in tests where acceptability judgements are looked for, must be considered as something quite different. It is not entirely unreasonable to argue as Sharwood Smith has done that the type of processing ability or skill involved here s a form of knowledge. Sharwood Smith has summed up the distinction neatly by characterizing the one *procedural knowledge* as answering essentially the question *how* and the other, *propositional knowledge* or competence as answering the question *what.* (Sharwood Smith 8I).

The above argument however is subject to one major elicitation paradox. All knowledge which the learner draws upon in real time situations must be accessed by way of the processing system. This means in practice that it is difficult, if not impossible to point to concrete examples of interlanguage which can be denoted as reflecting purely one rather than the other form of knowledge. The best that we can do in practice is to compare the results of different types of tests on the basis of reasoned hypotheses.

We now turn to consider the nature of the sentence itself. A wide measure of agreement exists among linguists as to its essentially unified nature. It is anticipational, recursive and integrational to a very high degree. In the context of fluent speech it is effected millisecond by millisecond. Its generative capacity is acquired by the speaker on the basis of a relatively small number of examples. In describing the nature of a linguistic code therefore it is fair to postulate the existence of two high level organizational principles which interact and exert a reciprocal effect on each other. These would include:

1) Skills of great automaticity acquired by practice and habit upon which the obtainment of unreflecting mastery depends.
2) The generative capacity for forming an infinite number of novel sentences.

At this point I would like to address the issue of learner error itself. It was characteristic of what one might call the classical works on Error Analysis to compare the student's developing linguistic competence to the type of language found among Creole speakers (Corder 1967; Selinker 1972; George 1971) However inherently appealing such an approach might have seemed, it was vitiated by one important oversight: the Creole speaker's language use displays a far greater degree of stability than the L2 learner whose output is strongly characterized by permeability and on-going development as he attempts to match the norms of a given Target Language group. (Adjemian 1976).

In fact, if we want to reach a meaningful understanding of the nature of learner error it is necessary to take psycholinguistic factors into account to a much degree than has previously been the case. If we we have intimated above, language production is initiated at a very high level in the processing hierarchy and if lexical storage as to be effected in such a way that retrieval can be carried out in ordinary conditions at immense speed, it follows that the generative activity of encoding will be subject to considerable constraints in the actual planing of the total utterance. In considering learner data account will have to be taken of the recursive nature and anticipational requirements of the syntactic devices involved.

After some reflection concerning the results obtained in tests mentioned above, together with some study of spontaneous data recorded over a period of three years, it was hypothezised that the length of clausal structure might be a factor affecting complement choice. *Length* here of course is used to refer primarily to the number of functors or functional morphemes contained in a given structure. The That-clause is thus generally longer than the gerund or infinitive since it contains more functors. (refer to table I). The question was how we could go about testing the hypothesis to the effect that complement length has a constraining effect where the production of sentences is concerned. In order to do this it was decided to set up two more tests in April 1984.

The first test involved sentence completion, a full sentence being supplied except for the verbal complement, the verb to be used given in brackets at the end of the sentence. A Dutch translation was supplied overhead each sentence so as to ensure that there would be no confusion regarding the meaning of the sentence in question. In all, there were some twenty-seven items covering a wide variety of English complement structures. The first four sentences were not taken into account, being intended only as a warming up exercise. Testees were allowed 8 minutes in which to complete the test which means that they that they had about 18 seconds in which to answer each question. The testees numbered thirty-five, all of Dutch mother tongue. The mean length of time spent studying English at secondary school was 4.43 years. The informants, therefore, it can safely be concluded, would have had a sufficiently wide acquaintance with the existence of the structures in question, in addition to the instruction they had received as part of their university course.

The second test consisted of the same questions. However this time four answers were supplied in each case and the student was required to tick the response he considered to be the best English. Unlike the first test, no time-limit was imposed.

The following hypotheses were made:

1) That in the sentence completion (SCT) students would show a greater tendency to opt for shorter complements, omit function words and prepositions.
2) That in the case of those verbs where a choice was possible between a long or short complement there would be a greater preference for the short complement in the SCT than in the sentence recognition test (SRT)

Both hypotheses seemed to be borne out by the results as may be seen in Table III below. A marked preference was found for the long complements in the case of *mention*, *admit* and *deny* in the SCT. While, however, in the case of *believe* and *assume* a striking tendency to delete the complementizer "that" could be observed, no clear preference could be detected for either the that-clause or infinitival forms.

Table IV

Verb+gerund or that-caluse		SC	SR
Mention	INF.	14.3%	22.9%
	GER.	25.7%	20%
	THAT	34.3%	37%
Deny	INF.	22.9%	31.4%
Deny	GER.	60%	42.9%
	THAT	5.7%	17.1%
Admit	INF.	20%	0%
	GER.	42.9%	20%
	THAT	22.8%	77%

Infinitive or that-clause

		SC	SR
Believe	INF.	23%	22.9%
	GER.	9%	14 %
	THAT	20%	60%
	THAT-DEL	43%	–
Assume	INF	37%	42%
	GER.	23%	20%
	THAT	9%	34%
	THAT-DEL	26%	–

N. B. underlined figures represent incorrect responses

If the results are considered in some detail, it will be immediately noticed that in the case of those verbs allowing either a long or short complement, there is a marked preference for the long form in the SRT. Curiously, this tendency is not observed to the same degree in the case of all three verbs in question, it being much greater in the case of *deny* and *admit* than *mention*. [3] In the case of those predicates accepting either an infinitive or that-clause complement no particular preference could be observed for one or the other. However there was a distinct tendency to delete the complementizer "that" which has already been alluded to above .More importantly, from the point of view of error analysis in the strict sense of the word, the number of errors produced in the case of the verb "prevent" was more than doubled in the fast SCT, for the most part the form being yielded:

*he prevented them to go

instead of the morphologically longer:

he prevented them from going

It follows from the above discussion that a plausible case can be made for the constraining effect of length in the production of complements in the interlanguage of students' performance. What is being suggested in effect is that prevalence of certain patterns cannot be explained alone in terms of pure negative transfer, failure to apply specific rules, overgeneralizations etc. This approach is inadequate since it fails to take sufficient account of serious constraints posed by the language processing load.

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[3] A possible explanation for the considerable differences obtained in the results between the three verbs may lie in the differing degrees of factivity which they involve. Factivity refers to the presupposition on the part of the subject of the main verb the proposition contained in the complement clause is true. This has very important consequences for the distribution of the complements in English. Typically factive verbs take gerundive complements while non-factives (such as "suppose") block their formation. However many verbs seem in practice to be indeterminate as to the degree of factivity involved. Arguably, "admit" is felt to invole more facitvity than "mention", since it seems to presuppose more strongly that an action has taken place.

Indeed researchers have been expressing increasing circumspection in relation to the standard approach for explaining student error. Wode has remarked that in terms of illustrative examples the various strategies of communication, overgeneralization, strategies of second language acquisition show no clear difference. (and here one might add in certain cases negative transfer) The result in every case is the same: simplification. The "cruciall question as to how this simplification is achieved in neuro-psychological terms is left unanswered" (Wode: 1981:55). Writing in a somewhat similar vein Pit Corder raised some questions reagarding the validity of the term "simplification" itself.; "if the student knew the correct form, then there would be no need for him to simplify it". (Corder 1975).[4] Interlanguage has come to be seen as less monolithic and systematic in its development than was previously thought to be the case. It is argued here that it is not enough to concern ourselves with the formal properties of linguistic devices with which the learner is endowed. We must take account of the actual conditions in which the learner is called upon to perform.

To conclude we will examine certain high frequency errors from essays in the light of the ideas outlined above. The correct structure is supplied in each case together with a Dutch translatioon.

Table V

a) 1 ...on the point *_to_ do...
2 _of doing_
3 (...op het punt om iets te doen...)

b) 1 ...the possibility *_to_ reach...
2 _of_ reach_ing_
(...de mogelijkheid om de top te bereiken...)

c) 1 ...look forward *_to_ meet you
2 *meet_ing_ you
3 _to_ meet_ing_ you
(...verheug mij reeds nu U te ontmoeten...)

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[4] Indeed the notion of simplification as such has seen much criticism in the field of socio-linguistics where it largely orginated. For instance, Alleyne goes so far as to state "in the case of 'creole' languages certainly those of English and French lexical bases, there is no lexical evidence to support the idea of simplification... the verbal system is if anything an *expansion* of the verbal systems of some European languages". (Alleyne in Hymes 1974:174)

d) 1 ...prevented us *_to_ arrive on time
2 _from_ arriv_ing_ on time
(...belette ons op tijd aan te komen...

e) 1 ...he demanded *them to show...
2 *them showing...
3 ...he demanded that they should show...
(...hij eiste dat ze hun identiteitskaart zouden tonen...)

It will be readily celar that a strong case emerges to support a length-constraint position. In each case, the erroneous form is shorter than the correct form in terms of the number of morphemes involved. This seems to be true whether or not it mirrors the NL form. The weakness of the usual attempt to explain errors in terms of "interference" becomes obvious if we consider example C. While the influence of the mother-tongue can be plausibly invoked to explain C. 1 it cannot explain C. 2 by any stretch of the imagination. A length-constraint approach, on the contrary, can account for both errors. Example E provides an even more striking example. If the student had transferred blindly from his native language, he would in all likelihood have produced an acceptable sentence.

It would undoubtedly be premature to end by making excessively strong claims about the role of length as a factor in interlanguage performance and potential source of error. Further studies need to be carried out involving larger numbers of informants and on different types of tests. Nevertheless, it is the view of the present researcher that *length* does constitute an important factor in the processing and production of embedded sentences. The results of the present study support in large part the findings of Anderson (78) and Bakker (83)[5] in relation to what they termed the "economy principle". The interpretive approach adopted is in line with the prevalent tendency to reassess the role of negative transfer in interlanguage and to view interpretations which make use of traditional learning theory in a more favourable light.[6]

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[5] While the Bakker study found a considerable predelection for the Equiinfinitive over the that-clause where both forms were possible little or no substantial support could be found in the case of the other short complement type the equi-gerund. The results of the present study seem to go beyond these findings in that evidence for the "overgeneralization" of short complements of both types has been discovered.

[6] It is interesting to quote Mowrer in this respect. He claims that much of the research done in the wake of the Chomskyan revolution was permeated by an extreme bias against learning theory.

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TONIC PROMINENCE AND THE CODING OF THEMATIC-RHEMATIC RELATIONS

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Given the existence of structural, segmental markers of thematic-rhematic division of utterances and its prosodic reflection in the form of prominence vs. lack of prominence, the question that might be aksed is: 'how do the two types of marking interact?'. Of special interest might be cases where grammatical and prosodic devices seem to diverge and prominence co-occurs with an element marked structurally for its thematic status and where rhematic position can coincide, if possible, with the lack of such prominence. Through considering the occurrence of the discrepant cases one might try to ascertain the relative value or weight of structural as opposed to prosodic markers in signalling thematic-rhematic relations by observing the resultant functional status of elements on which the divergence takes place.

After a brief indication of the way the main terms are uderstood here and a presentation of some 'regular' cases, we shall move on to considering the prosodic behaviour of explicitly thematizing and rhematizing constructions in English and Polish. Examples for illustration will include naturally occuring discourse fragments as well as contrived cases.[1]

The terminological confusion in the area has by now become a traditional target of criticism in the literaturue and stems not only from terminological abundance, but, more importantly, from the fact that opposite pair members may be used to describe the same thing, or same terms are taken to denote different concepts. With a resolve not to contribute to the confusion, we shall first try to specify in what sense 'theme-rheme' distinction will be used here.

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[1] The corpus from which the illustrations are drawn comprises Crystal and Davy 1981 (transcript with prosodic notation+tape), Maley and Moulding 1981 (transcript+tape), Svartvik and Quirk 1980 (transcript with prosodic notation), Underwood 1979 (transcript+tape).

Probably the best known characterization of theme-rheme distinction rests on the pragmatic notion of 'aboutness" (see Reinhart 1981 for its formal characterization), where the 'theme' is 'what the sentence is about' and the 'rheme' refers to 'what is said about it'.[2] The difficulty with this intuitive description was already pointed out by Jespersen. For instance, one might take a sentence like 'John promised Mary a gold ring'[7]to contain four things about which something is said and all of which could therefore be interpreted as themes: -John-, -promise-, -Mary- and -a gold ring- .However, the formula 'what the sentence is about' will lose some of its vagueness if it is applied jointly with the second part of the characterization: 'what is said about it' whereby the two would be complementing each other (Bogusławski 1978:143). If they are considered together as members of a bipartite unity, it is easier to find out what element corresponds more to the part 'spoken about' and which section of the sentence fits better the description 'what is said about it'; "the dissection of the formula into two separate parts dealt with independently contradicts the whole idea underlying it" (ibid.).

Because of its relative vagueness, however, the formula can only be treated as a general guide and should be replaced by a more precise characterization. A step in this direction has already been made in Reinhart (1981). Carlsson (1983) is a more recent attempt to defend the distinction within the framework of a new theory of conversational interaction that is proposed.

The thematic-rhematic division of utterances should not be equated with the 'given-new' distinction since, as has been convincingly demonstrated by Daneš (1960), Halliday (1967), Sgall et al. (1973) and Reinhart (1981), themes need not be textually or situationally recoverable and, together with rhemes, they can be carriers of new information while rhemes can contain 'given' elements.

Given and thematic elements often coincide as it is quite natural for the theme — as the point of departure for the speaker — to be given, since given elements make a natural starting point for the sentence. However, the reliance on the giveness of items as the operational criterion of theme identification would be mistaken because their convergence is sometimes as frequent as their divergence. At the beginning of a conversation, for instance, when nothing may be given, we still assign the role of theme to some element.[3]

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[2] Compare the formulation in Li and Thompson (1976:464) where the theme "limits the applicability of the main predication to a certain restricted domain (...), sets a spatial, temporal or individual framework within which the main predication holds". Similar characterization can be found in Tomlin 1983 where the theme is seen as referring to ,'that knowledge which the speaker assumes is relevant to the goal of the communicative event". Related to them is Reinhart's succint description of themes as constituting "signals for how to construct the context set, or under which entries to clasisfy the new proposition" (1981:80).

[3] Cf. Chafe in Li and Thompson (1976).

A more explicit determination of the thematic-rhematic partition of utterances than the characterization based on discourse strategy and on the notion of 'aboutness' to which we subscribe here, is offered by a series of techniques discussed at length in Bogusławski (1977). The most popular criterion takes the form of a 'question test' and is based on the premise that at least one question can be found for every affirmative sentence, a question that would fully represent the relevant features of the context in which the sentence may occur and to which the examined sentence would constitute a proper answer. The sentence is deemed ambiguous if two or more questions can be asked. While the sentence fragments appearing in each question that may be posed belong to the theme of the sentence, those which do not surface in any of the questions belong to the rheme, and those elements which occur in some questions only, form a potential range for the thematic section.[4]

Thus for the sentence:
John is going home to visit his parents
the following set of questions may be given:

a) What is John doing?
b) Where is John going?
c) What is John going home for?
d) Who is John going to visit at home?

while the questions:

e) Who is going home?
f) Where is John going to visit his parents?

do not belong to the same set, given the placement of tonic prominence on the word 'parents'. According to the test then, 'John' is the theme, the phrase 'his parents' forms the rheme, and the words 'going' and 'home' may belong to either section.[5]

The operational criterion with which we are concerned here is prosodic marking. Generally recognized is the signalling of rhemes with heavy accent, with the thematic part left unaccented or rendered prosodically in a more subdued manner than the rhematic part. This attenuation is said, basically, to be manifested through weak stress and low pitch (e.g. Chafe 1976), although, in fact, themes are often conveyed in a more forceful way in the form of a gliding tone. Such a non-prominent tonic in thematic position is characteristically implemented as a low rising or a falling-rising tone. When we compare sentences in (1) we may notice how the change of the prosodic shape of the theme can affect its weight:

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[4] This issue is dealt with more extensively in Sgall et al. (1973).

[5] The question test has, however some limitations which are discussed in Bogusławski (1977) and Sgall et al. ibid.

1) a) His oˉpinions need not conˋcern us
   b) His oˏpinions need not conˋcern us
   c) His oˇpinions need not conˋcern us

The theme gradually seems to be enriched with additional predication which might be rendered lexically with expressions like 'as regards', 'as for', 'as far as (something) is concerned', etc.

In this context we may recall Halliday's system category of 'thematic contrast'. Under this heading he recognises 'unmarked themes', 'contrastive themes' and 'confirmatory themes', each of which receives different prosodic interpretation. The unmarked theme is realised with a narrow range falling-rising tone (1c) as opposed to a wide fall-rise which would make the theme 'contrastive'. 'Confirmatory' themes, on the other hand, are expounded by low rising tones as in (1b). Cases like (1a) would probably be treated under the separate category of 'neutral tonality' (Halliday 1967:41).

The labels Halliday employs are somewhat misleading since they introduce qualitative evaluations to capture gradient differences which should rather be expressed in quantitative terms. The term 'unmarked', for instance, might better be reserved for those cases where the thematic position is occupied by a static tone, this being the least weighty example of a strongly stressed theme. And while the label 'confirmatory' is sufficiently neutral, the term 'contrastive' is much leass felicitous since it suggests that we are dealing with contrastive sentences as such. Instances of wide range falling-rising tones located in thematic positions differ from truly contrastive sentences[6] in that they are followed by a strong stress in the form of a nuclear tone in rhematic positions. The prosodic centre of a contrastive sentence, on the other hand, is located on the item thus highlighted and can be realised prosodically in a number of ways, where a wide fall-rise is only one of them.

To illustrate the foregoing remarks, let us consider some examples with more complex thematic parts which would make it easier to observe the prosodic effects in question. For want of better alternatives we shall use Halliday's terminology.

A. Neutral tonality — the thematic part does not constitute a separate tone-group and does not contain a gliding tone.:

2) The ˈcheapest ˈseat costs ˈless than a ˋpound
   ˈJohn and ˈGeorge seemed ˈrather ˋkeen
   ˈPlaying °chess with ˈJohn is ˈquite an exˋperience[7]

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[6] We subscribe here to Taglicht's understanding of contrast which will be referred to below.

[7] These examples, taken from O'Connor and Arnold (1976), retain the prosodic notation of the original.

B. Confirmatory themes — basically realised with low-rising glides. This category would also have to comprise cases of static tones which can fulfil a nuclear function:

3) The ˈcheapest ˏseat / costs ˈless than a ˋpound
ˈJohn and >George // seemed ˈrather ˋkeen
ˈPlaying °chess with >John // is ˈquite an exˋperience

C. Unmarked themes — containing narrow range falling-rising tones coming on the rightmost stressable items in thematic positions:

4) The ˈcheapest ᵛseat // costs ˈless than a ˋpound
ˈJohn and ᵛGeorge // seemed ˈrather ˋkeen
ˈPlaying °chess with ᵛJohn // is ˈquite an exˋperience

D. Contrastive themes — typically including instances of wide range falling-rising tones. The appearance of other glides seems also possible provided they all receive wide pitch range interpretation:

5) The ˈcheapest ˇseat // costs ˈless than a ˋpound
ˈJohn and ˋGeorge // seemed ˈrather ˋkeen
ˈPlaying °chess with ˆJohn // is ˈquite an exˋperience

As we have already observed, the sentences in (5) are not truly contrastive and should thus be more appropriately termed as cases of 'emphatic' or 'highlighted' themes. What rules out the possibility of a truly contrastive interpretation for these sentences is the presence of nuclear glides in rhematic positions preventing the acquisition of prominence by the thematic parts. Firbas observes that "of two prosodic features phonically equal (...) the one occurring further on within a distributional field will be functionally weightier" (1972:86). This means that the last glide in a series of distributionally related tones will carry greatest prominence thus supporting the rhematic character of the element on which it is located.

However, the generalisation requires some modifications. One of them concerns instances of a low rising tone following a falling glide:

6) ˋSmoking should be forˏbidden
ˋJohn went to the ˏopera

where the final low rises are functionally subordinated with respect to the preceding falls.

Another modification is necessitated by the appearance of a low falling tone occurring within a group of low pitched syllables coming after a high falling glide like in (7):

7) Drinking ˋcoffee makes me sleepy after a good ˎdinner

where the final part is overshadowed by the initial section.

The principle requires yet other modifications to account for more cases that apparently violate it. Thus the observation exemplified in (6) should be extended to cover those cases where the thematic position contains either a falling-rising or a rising-falling glide as it (8):

8) ˅John went to the ˏopera
˄Smoking should be forˏbidden

Analogously to example (7), the initial section of the utterance will lose its neutral thematic character when realised with a rising-falling glide and followed by a series of low — pitched syllables terminating in a low falling tone:

9) Drinking ˄coffee makes me sleepy after a good ˎdinner

Interstingly enough, it is only the low rising and the low falling terminal glides which, under certain circumstances, may lose their prominence within the utterance. Apparently they are much weaker than other glides and the fact they retain their prominence in other cases is probably due to the strong pull exerted by the rightmost position they occupy. This effects the loss of the neutral character of the initial thematic sequence, for in order to remain truly thematic, the appropriate elements must be followed here by functionally heavier prosodic features.

As we have observed, the occurrence of tonics in thematic positions is quite a normal phenomenon. It is the presence of a tonic in rhematic positions which outweighs the preceding cases of pitch movement and makes the final tonic appear as prominent despite the fact that it need not exhibit wider pitch movement. This is partly borne out by experimental findings reported by Liberman and Pierrehumbert (1984) who recognise the so-called 'declination line' effect whereby overall pitch range tends to lower and narrow itself towards end of utterance. In consequence, two consecutive tonics with identical fundamental frequency values need not count as having the same prominence: "listeners normalize for the declination effect in computing relative promience, so that the second of two equal accents in general sounds higher. For two accents to sound equally prominent, the second must in general have a lower Fo value" (ibid. p. 163).

Tonic prominence is a relational concept — a tonic is prominent or not relative to some other tonic in a given domain, be it a distributional field of th/rh relations or, generally, a paratone[8], or an intonation contour. Thus it has the advantage of referring back to the last pitch movement in a contour and to one of the tonics in a series of contours in a paratone.

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[8] Following Yule (1980), the term 'paratone' is understood here as a unit of organization above the tone group, normally co-extensive with a stretch of discourse related to a single topic and identifiable not by its internal structure, but by its boundaries. The beginning point of a paratone is marked by a high pitch, a raised baseline extending

We would stipulate that it is not the presence of 'heavy stress' which matters in signalling th/rh structure but the relative prominence of tonics within the distributional field of th/rh relations which may cover more than just one contour. The traditionally used concept of 'heavy stress' cannot account for the sentence in (9):

9) Yes it was in ⑊Sweden // that I ˈthink the most em ᵛbarassing thing // that ⑊ever happened to ˌme // oˎccurred[9]

where the words 'Sweden', 'embarassing', 'ever', 'occurred' — all receive quite heavy stresses in separate tone-groups and where only the initial stress is prominent, thereby safeguarding the rhematic character of the clefted phrase. (Notice the effect on th/rh relations that the change of pitch level from low to high for the final fall would bring). We shall return below to the problem of prosodic behaviour of clefting constructions.

As regards structural marking of th/rh relations the weakest coding device is linear ordering of items. Here, as we have observed, the presence of tonic prominence in thematic position renders the items thus highlighted rhematic or rhematic/contrastive. The occurrence of non-prominent tonics is also possible with the resulting variation of the 'given/new' status of themes which distinction may be manifested through the differential use of kinetic and static pitch movement[10].

Let us compare the following examples taken from natural discourse:[11]

10) a. But I couldn't get olive oil. I've got this vegetable oil.
ˈOlive oil they just didn't ˋhave

b. I think you'll have to make do with that.
ᵛWine vinegar I've got ˎtoo

The initial phrases 'olive oil' and 'wine vinegar', although resulting from the use of an identical thematizing technique, differ with respect to tonic placement. In (b), with the falling rising glide on 'wine' marking the introduction of a brand new theme into discourse, tonic prominence occurs finally on 'too'.

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over a series of tone groups (three to five, on the average), or by a drop in pitch initiating a falling baseline of unstressed syllables stretching over a number of tone groups. The end point of a paratone is typically realised by very low pitch and a long pause with the accompanying loss of amplitude.

[9] Underwood (1979:148).

[10] See Pakosz (1981) for the discussion of this issue.

[11] Maley and Moulding (1981:56).

Its shift to thematic position would render the framgent in (a) ill-formed and lend (b) an air of contrastivity.[12]

More sensitive to conflicts between their thematic status and the placement of tonic prominence are cases of dislocations (left and right) and Wh-clefts whose thematic sections do not easily allow even for a contrastive interpretation:

11) *This WEATHER, it really depresses me[13]
*It leaves a nasty taste in the mouth, this DRINK
*What UPSETS me is those drunk drivers

The unacceptability of these sentences is due to the use of explicitly thematizing constructions which, when accompanied by prominence (marked with capital letters), do not lend themselves easily to contrast based interpretations. To make sentences in (11) more acceptable, the thematic sections would have to be followed by non-subordinate tonics, preferably, in separate tone-groups.

It may be observed that marked themes, arising through the operation of various topicalization rules, in contradistinction to unmarked themes, are more likely to attract pause insertion and appear as separate tone-groups:[14]

12) Ge>ography // he's pretty ˋgood at
But his ˇsister // I like enˋormously
>Henry °Martin // I've ˈmet °somewhere beˋfore
ˏThose // you can take ˋany time

When we compare different types of marked themes with respect to this predominant tendency for tonic placement, we may notice how some of them can be denuclearized when 'given' while others cannot. In (13) examples are given of marked themes that constitute separate tone-groups and thus carry nuclear tones. Although both the thematic and the rhematic sections contain tonics, it is only the final position in these sentences that carries tonic prominence thus safeguarding its rhematic status. Sentences in (14), on the other hand, display marked themes which may easily be denuclearized:[15]

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[12] In the sense of Taglicht's 'implicit contrastiveness', i.e. presented as one of a pair of opposites where only one of them is acutally mentioned.

[13] Although left-dislocated items, by being located outside main predication, are not strictly speaking themes (c.f. Dik (1978), Brömser (1984), Grzegorek (1984), they are treated here on a par with themes since they serve the function of specifying sentence topics. For the purpose of our presentation the difference does not appear essential.

[14] At least this is the tendency that may be observed in actual discourse fragments and in the contrived examples in O'Connor and Arnold (1976) quoted here. Further verification is needed, however.

[15] O'Connor and Arnold, ibid.

13) a. >Hope // that's ˈall you ˋcan do
    b. ˏJohn // I′listened to for ˈhalf an ˋhour
    c. My ˋfather // he's ′bugging me aˋgain
    d. This ˬpaper // it's ˈalmost ˋdone
    e. English ˇmuffins // I can ˈeat every ˋmorning
    f. But his ˇsister // I like enˋormously

14) a. For the >most part // it was ˈvery ˋgood
    b. That ˌJohn will ˌfoot the ˏbill // is ˋcertain
    c. The ˈone who ˇsaid it // was his ˋboss
    d. The ˌday after to ˇmorrow // I′hope to reˈturn ˋhome
    e. In ˇJune // he's ˈgoing on ˋholiday
    f. ˋHow he's done it // ˈnobody ˋknows

It seems that the difference in behaviour between (13) and (14) may be attributed to the different types of topicalization rules employed in the two sets of sentences. Cases which do not undergo denuclearization in (13) involve examples of Object Fronting (a, b, e, f) and Left Dislocation (c, d). In (14), on the other hand, we are dealing with such thematization techniques as Adverb Fronting (a, d, f) Subject-Subject Raising (b), and Pseudo-clefts (c). The second set contains examples of themes which can be denuclearized when found, for instance, in enumerative contrast. Thus the themes arising out of Object Fronting may merge into one tone-group with their rhemes:

15) English ˈmuffins I can eat every ˋmorning // English ˇdoughnuts I ˋhate
    John's ˬbrother I deˋtest // but his ˈsister I like enˋormously

Such combinations, however, are not possible in the case of Left Dislocation (13 cd) which appear immune from most forms of compounding and embedding and whose tonicity remains 'frozen'.

In colloquial Polish there is a particle -to- which may optionally follow the thematic section, e.g. 'we wtorek to nie mam czasu' (on Tuesday I have no time) and can be used, it appears, as a diagnostic for theme identification. It cannot, for instance, accompany items which lack referents or are rhematic:[16]

16) *Ktoś to przeszedł do ciebie (Somebody came to you)
    *Żaden człowiek to nie może znać się na wszystkim
    (No man can know everything)

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[16] See Reinhart (1981) for her characterization of the requirements that thematic phrases must meet.

The particle may also be used for the demarcation of the range of thematic section

17) Zakupy to // wieczorem w sobotę trudno zrobić
(Shopping-in the evening-on Saturday-difficult-to do — It's difficult to do shopping on Saturday evening)
Zakupy wieczorem to // w sobotę trudno zrobić
Zakupy wieczorem w sobotę to // trudno zrobić

Moreover, it does not normally co-occur with finite verbs:

18) *Przejrzałem to już pół/biblioteki i nic nie znalazłem
(I went through half the library and didn't find anything)
*Wygrali to piąty mecz
(They won the fifth match)

while it can follow infinitives:

19) Przyjechać to nie przyjechałeś, a teraz masz pretensje
(Come you didn't and now you are complaining)

The particle also behaves in a predictable way with respect to existential or presentational sentences where the appearance of prosodically prominent initial phrases (marked in capitals) rules out the occurrence of -to-:

20) *SAMOCHÓD to mi się popsuł (My car broke down)
*PŁASZCZ to sobie pobrudziłeś (There's a smudge on your coat)
*Nowe KSIĄŻKI to przyszły do księgarni (There are new books in the bookshop)
*ANDRZEJ to przyjechał (Andrzej has arrived)
*ZUPA to wykipiała (The soup has boiled over)

To render these examples acceptable another tonic would have to be placed later in the sentence giving rise to a marked contrastive interpretation:

21) Andrzej to PRZYJECHAŁ (a Adama jak nie ma tak nie ma)
Nowe książki to PRZYSZŁY do księgarni (a mydła nadal brak)

Normally then, the material followed by the particle -to- cannot associate with tonic prominence, though it may carry non-prominent tonics even in separate tone-groups:

22) >Posprzątać // to ci się NIE chce (clean-you don't want)
ᵛChwalić // to ja jej nie CHWALIŁEM (praise-I didn't praise her)
ˏWypić // to on jednak POTRAFI (drink-he afterall can)
^Szacunku dla starszych // to masz za DUŻO
(respect for the elderly-you've got too much)

The shift of prominence to themes within the paratones would result in a substantial decrease of their acceptability unless they are found in corrective focus where the speaker would be setting the listener's auditory impression right:

23) Mówię że
POSPRZĄTAĆ to ci się nie chce
CHWALIĆ to ja jej nie chwaliłem
(I'm saying that...)

There are some curious cases, however, where the particle-to- follows tonic prominence and where the initial phrases thus highlighted receive considerable degree of emphasis:

24) ADAM to mi się podoba (I do like Adam)
ONA to ma powodzenie (Now isn't SHE popular!)
Z TOBĄ to lubię rozmawiać (I do like talking to you)

The occurrence of prominence to the right will this time result in a two-way contrastive interpretation:

25) Adam to mi się PODOBA (ale Paweł nie — but not Paul)
Ona to MA powodzenie (ale on nie — but not him)
Z tobą to LUBIĘ rozmawiać (ale z nim nie — but not to him)

However, the set of examples in (24) appears to be restricted to some kind of evaluation phrases which casts doubt on the identity of the word -to- used here. It seems that the particle in (24) is not the same entity as the one delimiting the thematic sections in (17) through (22). In its different function it tends to co-occur with the intensifying word -dopiero-, where the whole phrase -to dopiero- indicates a highly emotive, 'awed' or 'impressed' attitude on the speaker's part:

26) ONA to dopiero ma powodzenie
Z TOBĄ to dopiero lubię rozmawiać
Do DOMU to dopiero bym chętnie pojechał
(I do wish I could go home)

The shift of prominence to final position here would render the sentences very unacceptable.

Thus it has to be concluded that both in English and Polish explicitly thematizing constructions can only attract non-prominent tonics and that themeness (if not identified mechanistically with initial position) is incompatible with prominence. The presence of tonic prominence in thematic sections lowers considerably the sentences acceptability in the cases where the conflict between grammatical and prosodic devices cannot be resolved by making recourse to some kind of contrastive interpretation.

Another source of conflicting devices in the thematic-rhematic coding is constituted by clefting competing with lack of prominence. It seems particularly appropriate for our purpose since the effect of clefting is to focus syntactically a constituent by bringing it to the front of the sentence. The usefulness of the cleft sentence resides partly in its unambiguous marking of the rheme in written language where prosodic information is virtually absent. The highlighted element of the it-cleft characteristically implies contrastiveness in the sense of 'implicit oppositeness' (Taglicht 1982:227) which may become stronger or weaker depending on the size of the set of potential values which are being opposed.

In her discourse based investigation of clefts, Prince (1978) observes that it-clefts and Wh-clefts are not interchangeable in discourse: "in contrast to the Wh-clefts, the information represented in it-cleft that-clause does not have to be assumed to be in the hearer's mind, although of course it may" (p. 894). In this context she distinguishes between two types of it-clefts: 'stressed-focus it-clefts' and 'informative-presupposition it-clefts'. The former typically has main stress located in the main clause while the latter displays heavy stress coming on the suboridnate clause and conveys information that is generally known to people but not necessarily to the hearer, like in (27):

27) It was just about fifty years ago that Henry Ford gave us the weekend. On September 25, 1926, in a somewhat shocking move for that tiem...

It turns out that the occurrence of prominence in the main clause is by no means the indisputedly predominant case for it-clefts. In the nearly eleven hours of natural discourse data examined[17], out of the total number of 17 it-clefts, only 11 examples with initial prominence could be found. The rest of the sentences exhibit tonic prominence in the that-clause — a rather striking result considering the standard opinion on the regularity of initial heavy stress with this type of clefts. The numbers are even more significant when we take into account the fact that in the 11 'regular' cases, 8 examples had another tonic placed in the subordinate clause side by side with the prominent tonic of the main clause. This reduces the number of prosodically 'classical' it-clefts to 3 i.e. 17,6% of occurrences. Of special interest are the cases where contrary to expectation prominence was located in the that-clause. Altogether there were 6 clefts of this type (35,3%) forming twice the number of the 'canonically' shaped sentences.

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[17] The data comprise the materials referred to in footnote (1).

It seems that Prince's 'common knowledge' principle mentioned earlier is not sufficient to account for these cases of mismatch between lack of prominnece and the rhematizing construction used. In fact the principle can account for only one case in the data:

28) James, it was no good. You didn't tell me to sell out.
It was I who said I WANTED to sell out.

By employing the device of 'information-presupposition' it-cleft here the speaker wants to indicate to the hearer that the information should be accepted as a fact even if he cannot relate it to his consciousness but has to take it as new in the preceding context. This is a clever stratagem meant to convince the listener that the information presented in the it-cleft is part of shared knowledge and thus beyond dispute.

The remaining instances with lack of prominence involve cases of given information present in the main clauses of the clefts with the material included there having been referred to explicitly in the immediately preceding discourse:

29) It's the travel that APPEALS to me this is why I'm er enquiring about the job.
So it's not until next year that the job will be ADVERTISED.
Well it's it's money you know that LIMITS you.
It's the money that LIMITS you.
Well it'll be capital gains that he has to PAY now//and death duties later on.

It must be concluded that the given-new distinction can override the thematic-rhematic structuring as far as the prosodic reflection of the dichotomies goes. Although clefting remains a powerful rhematization device the fact that tonic prominence fails to coincide with the focussed part vitiates the rhematic status of the main clause — the question test will still identify it as thematic.

A different situation obtains for Wh-clefts. Within the same corpus of discourse data we encountered nine cases of pseudo-clefts all of which conformed to the expected pattern with tonic prominence occurring inside the rhematic main clause. Characteristically however in eight cases there appeared nonprominent tonics in the thematic Wh-section. This finding remains at odds with earlier observations related to the unstressed nature of the Wh-clause. It should be pointed out that we could not find a single instance of prominence located within the thematic Wh-clause although this part may clearly contain either new information or 'deactivated' given information.[18] In the latter case the hearer must reactivate the given information in order to find a point of reference for the new information of the next clause; e.g.:

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[18] In the sense of Engelkamp and Zimmer (1983).

30) What I want and must find \out // is about those \seminars // that MILLICENT was talking about.
What \I've found in winding stuff/ back // is that it's difficult to marry things UP again.
What I think he doesn't ᵛrealize // is that it's very largely ^because he's been \building // this kind of peripheral thing in ˏAppleby that it HAS gone down.

It is probably the obligatory presence of new information in the second-rhematic part of the Wh-cleft that makes the non-occurrence of tonic prominence there virtually impossible. The stability of the aglingment of given (deactivated given) vs. new information, in comparison to its different co-occurrence possibilities in the it-clefts, appears to preclude any variation in the placement of prominence in pseudo-clefts.

The Polish equivalent of the it-cleft in English is the construction 'to właśnie' placed in front of the elements to be highlighted. Different distribution of prominence here, similarly to the English examples, will yield the following interpretation possibilities:

I. Initial prominence, no other tonic following:
To właśnie w WARSZAWIE poznałem swoją żonę
(It was in Warsaw that I met my wife)
To właśnie SŁOWNIK będzie mi potrzebny na zajęcia
(It's a dictionary that I'll need for classes)
(initial rheme, second part unambigously thematic and given);

II. Initial prominence, subordinated tonic following:
To właśnie w WARSZAWIE poznałem swoją \żonę
To właśnie SŁOWNIK będzie mi potrzebny na ˏzajęcia
(initial rheme, 2nd part deactivated given);

II. Initial non-prominent tonic, final prominence:
To właśnie w ᵛWarszawie poznałem swoją ŻONĘ
To właśnie \słownik będzie mi potrzebny na ZAJĘCIA
(initial theme — deactivated given, 2nd part rhematic)

IV. No tonic initially, prominence final:
To właśnie w Warszawie poznałem swoją ŻONĘ
To właśnie słownik będzie mi potrzebny na ZAJĘCIA
(initial theme — given, 2nd part rhematic).

The introductory expression 'to właśnie' gives all the sentences an air of emphasis which may, as in (IV), extend over the whole sentence.

What can be inferred from these examples is that the initial rhematizing expression cannot enforce rhematic reading on its own without the co-operation of prosodic marking. Prominence distribution here, like in the previous set of examples, takes the upper hand; the apparent incongruity between prosodic and structural theme/rheme marking devices, however, does not lead to unacceptability, as in some cases before, but may result in the realignment of th/rh relations with the corresponding changes in the given/new potential. This realignment can easily by diagnosed by the question test.

It may be maintained that, for both languages, in cases of competing clues, prosodic signalling may be allowed to fulfil different discourse functions (like the reflection of the given/new algnment of elements). Grammatical and segmental coding of th/rh relations cannot enforce a certain prosodic interpretation which may be pre-empted by other factors, given the existence of favourable discourse conditions.

However, as we have been trying to demonstrate, one has to operate with a concept different from that of accent or nucleus. By using the term 'tonic prominence' — a relational entity employed to describe a perceptual category of prosodic dominance, we stipulate that it is not the occurrence of individual tones which matters in signalling th/rh structure but their mutual relationship in terms of relative prominence. One tonic may or may not be prominent with respect to some other tonic or a sequence of tones within one domain or distributional field of th/rh relations (or a paratone) depending on its tonetic shape and sequential position. The high density of tonic occurrence in natural discourse data makes tonic prominence a useful concept to work with when evaluating th/rh relations, where what counts is both the paradigmatic and syntagmatic alignment of tones.

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ON QUANTIFIERS AND NEGATION IN CZECH*

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1.0. As an introduction to the theme I would like to refer to the principal points from my article "The function of quantifiers in Czech negative sentences"[1] and to add to it some new information (1.0.—1.3.). This forms the basis for the main part of the present paper, in which I will pay attention to larger structures of the same type (2.0.—3.4.). In the quoted article I analysed the semantic and quantitative relations in the smallest possible combinations (hencefort MIN COMB/COMB^{s})[2] of quantifiers (Q/Q^{s}) and verbal negation (NEG), i.e. the combination of one quantifier and NEG. The analysed Q^{s} I selected from three functionally and semantically corresponding groups, each of them occupying a different position on the quantitative scale (QS). On this scale we can distinguish three positions and two poles — positive and negative.

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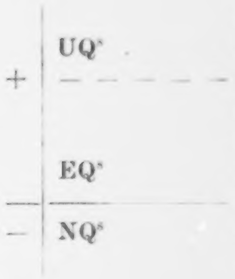
* I would like to express my sincere gratitude to professor dr. J. Miller, professor dr. C. L. Ebeling, and dr. J. Gvozdanović for many valuable comments on this paper.

[1] In A. A. Barentsen, B. M. Groen, R. Sprenger (eds.) *Studies in Slavic and General Linguistics*, Vol. 1, Rodopi, Amsterdam 1980, 103-123.

[2] Abbreviations and symbols:

BAS COMB/COMB^{s} — combination/c-s of 2Q^{s} and NEG
COMB/COMB^{s} — combination/c-s of Q/Q^{s} and NEG
EQ/EQ^{s} — existential quantifier/q-s
EXT COMB/COMB^{s} — combination/c-s of 3 Q^{s} and NEG
FSP — functional sentence perspective
ICC — intonation contour conclusive
IC/IC^{s} — intonation contour/c-s
ICNC — intonation contour non-conclusive
MIN COMB/COMB^{s} — combination/c-s of 1 Q and NEG
NEG — negative verbal form
NQ/NQ^{s} — negative quantifier/q-s

Fig. 1



In the highest position on the positive pole are placed universal quantifiers (henceforth UQ/UQ^s) which have a total quantity (+TOT QU).

In the mid position, still on the positive pole are existential quantifiers (EQ/EQ^s); their quantity is partial (PART QU).

In the lowest position of the QS, on its negative pole, are found negative quantifiers (NQ/NQ^s), which have a total quantity again (−TOT QU).

Each group is represented in the present research by four Q^s which — following the traditional division into word categories — belong to the category of pronouns or pronominal adverbs.[3] The actual Q^s are: *všecko, všichni, vždycky,*

PART NEG	— partial negation
+PART QU/QU^s	— positive partial quantity/q-s
−PART QU/QU^s	— negative partial quantity/q-s
POL	— polarity
+POL	— positive polarity
−POL	— negative polarity
Q/Q^s	— quantifier/quantifiers
QU/QU^s	— quantity/q-s
QS	— quantitative scale
SE	— semantic extent
SS	— sentence stress
TOT NEG	— total negation
+TOT QU/QU^s	— positive total quantity/q-s
−TOT QU/QU^s	— negative total quantity/q-s
UQ/UQ^s	— universal quantifier/q-s
V/V^s	— verb/verbs
—	— mark on the syllable which bears SS
→	— the arrow points to the formula in which given operation is figured by means of symbols, brackets and marks for SS
:	— besides the common usage it can be applied between two entities in order to indicate their contrastive relationship
/	— besides the common usage it is applied for division of the COMB which differ either in the position of SS or in the word-order (the divided entities have in principle the same meaning)
—	— besides the common usage this mark is applied for dividing of the variants of one COMB which have different IC^s (but in principle the same meaning)
>	— means: has to be changed into
*	— ungrammatical or inacceptable expression

[3] A more detailed description of the quantifiers discussed is given in my article mentioned above.

všude (everything, everybody, allways, everywhere) for UQ^s, *něco, někdo někdy, někde* (something, somebody, sometimes, somewhere) for EQ^s and *nic, nikdo, nikdy, nikde* (nothing, nobody, never, nowhere) for NQ^s. The first two Q^s of every group refer to things or human beings respectively, the others denominate temporal and spatial data.

In sentences with Q^s we can find in principle two forms of negation[4]: partial negation (PART NEG) and total negation (TOT NEG), e.q. *Něco neviděl* (He something did not see) for PART NEG and *Nic neviděl* (He did not see anything) for TOT NEG. In contrast with sentences without Q^s, the form of negation depends here in the first place on the kind of Q which is used. The both forms are find with UQ^s which can bring about in connection with NEG (or another operator of negation) the meaning of PART NEG as well as that of TOT NEG (cf. e.g. the examples ad MIN COMB^s (1a), (1b)). The primary dependence on the kind of Q for the extent of negation holds also for COMB^s with more than one Q (see chapter 2.0.—3.4.). Besides, in these larger COMB^s, the extent of negation can be expressed as the scope of negation focused on one of the Q^s by the intention of the speaker.

TOT NEG as well as PART NEG occur even in the MIN COMB^s. The meaning of PART NEG results from joining NEG to UQ^s, provided that an appropriate intonation contour (IC) is used and that the sentence stress (SS) is placed correctly. Further the meaning of PART NEG is present in MIN COMB^s of the type EQ+NEG.

The meaning of TOT NEG always comes from the combination of NQ^s +NEG.[5] This meaning also results from joining NEG to UQ^s, but in this case a specific IC should be used and a strong SS should be put on the given $\overline{\mathrm{UQ}}$ (SS is marked by ¯ above a letter or syllable).

1.1. The application of an appropriate IC, the position of SS in a COMB and to some extent the word-order are determined by the speaker on the basis of the FSP he wishes to express. The strategy of the speaker with respect to the FSP is also responsible for the choice of Q^s in actual texts. As the effect of the above-mentioned factors (IC, position of SS and word-order) is very complex, it is outside the scope of this paper. However, I will make a few preliminary remarks here, and particular examples will be analysed in more detail in the description of the larger COMB^s.

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[4] Although in general the difference between the meaning of 'negation' as a semantic process and the meaning specified here as NEG is clear, in the present paper these meanings sometimes overlap each other.

[5] The question which one of the members in this combination is the operator of negation is discussed in the analysis of BAS COMB (6). This phenomenon (inter alia) has recently been studied by Koenitz. His analysis agrees with the one presented here (see bibliography).

The analyzed COMB^{s} can occur with two types of IC^{s}:

a. non-conclusive (ICNC)[6],
b. conclusive (ICC).

Roughly speaking (no details will be given), ICNC has the last SS on the last word in the construction, and typically rises at the end. On the contrary, ICC has the last SS on a non-final word and it does not rise at the end. The exception here are COMB^{s} of the type NQ/NQ^{s}+NEG in which — when they appear with the reverse order — the last SS falls on the last word, cf. *Nevidĕl* $\overline{\textit{nic}}$ (i.e. the difference between *Nevidĕl* $\overline{\textit{nic}}$ with ICNC and *Nevidĕl* $\overline{\textit{nic}}$ with ICC is signalled by the lack of final pitch rise in the latter construction).

ad a. In COMB^{s} with ICNC all three kinds of Q^{s} can be used. Characteristically, when using ICNC, there is an expectation on the part of the hearer that the action, indicated by the verb, is achieved. In cetrain cases this may amount to the action in its totality. In the latter event the expectation might be expressed by means of a TOT QU (cf. *TAB. 1.*). The response to this expectation, i.e. the actual text of the COMB, reveals however, that only PART QU has been reached or that there was no achievement at all. In COMB^{s} which occur with ICNC, SS can be placed either on $\overline{\text{NE}}$G (*Všecko* $\overline{\textit{ne}}$*vidĕl*, *Nic* $\overline{\textit{ne}}$*vidĕl* — He did not see everything, He did not see anything) or on the $\overline{\text{U}}$Q/$\overline{\text{N}}$Q(*Nevidĕl* $\overline{\textit{v}}$*šecko*, *Nevidĕl* $\overline{\textit{nic}}$); however, this does not apply to the COMB^{s} of the type EQ+$\overline{\text{NE}}$G (*Nĕco* $\overline{\textit{ne}}$*vidĕl* — He did not see something). Although these COMB^{s} occur exclusively with ICNC, the SS always stays on $\overline{\text{NE}}$G, and, moreover, the order of the words is not reversible (cf. the influence of hypersyntaxis in 2.4). COMB^{s} in which ICNC is applied very often form the non-final part of a complex sentence.

ad b. In COMB^{s} with ICC only UQ^{s} and NQ^{s} can be used; they always carry SS (e.g. $\overline{\textit{V}}$*šecko nevidĕl*, $\overline{\textit{N}}$*ic nevidĕl* — $\overline{\text{E}}$verything he did not see[7], meaning the same as the second example, i.e. He did not see anything). In larger COMB^{s}, which are mixed as to the kind of Q, an EQ may also be used, but is does not carry SS. The application of ICC with the COMB UQ+NEG results thus in an essential shift in meaning as compared to the meaning ad a. With the COMB NQ+NEG only a slight semantic variation follows which is based on a different FSP. ICC characterizes situations where one expects the achievement of the action to the extent of a PART QU. By contrast, the actual text of a given COMB contains the information that nothing has been reached (i.e. —TOT QU). As to the COMB $\overline{\text{U}}$Q+NEG the mentioned factors together with the indicated word-order account for the actualization of the secondary meaning of this COMB, which is TOT NEG (the primary meaning is that of PART NEG as in ad a.).

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[6] Kučera (1961:43 ff.) uses terms equivalent to 'conclusive' and 'non-conclusive, together with a third term for another type of IC.

[7] In some cases it is necessary to violate the usual English word-order for the purpose of expressing the semantic relationship which is found in a given COMB in Czech.

COMB^s with ICC do not occur as a non-final clause in a complex sentence. It is worth mentioning that the SS in this type of COMB^s is most often emphatic.

TAB. 1 gives a summarizing view on the interaction of IC, SS and FSP in MIN COMB^s.

TAB. 1

ICNC			
I		II	I Expectation: +TOT QU Result : PART QU
Všecko neviděl/ *Neviděl všecko*	*Něco neviděl* —	*Nic neviděl/* *Neviděl nic*	II Expectation: achievement of a result Result : no achievement
ICC			
Všecko neviděl —	—	*Nic neviděl/* *Neviděl nic*	Expectation: PART QU Result : −TOT QU

1.2. There are no special restrictions on the grammaticality of MIN COMB^s. All the Q^s of each group can be joined with verbal negation (NEG). With respect to word-order, although the COMB^s of the type NQ+NEG are fully reversible, and the type UQ+NEG is reversible to a lesser extent depending on the actualized meaning, COMB^s of the type EQ+NEG have only the word-order EQ+NEG (cf. the description of MIN COMB (2)). In the description given below we are concerned with the quantitative processes which take place in the MIN COMB^s (see for abbreviations and signs *Note 2*). In contrast to the larger COMB^s, the quantitative processes here are not complicated (see also *TAB. 2* following after the discussion). For the verb I have chosen *'vidět'* (to see) because of its high frequency in such constructions and also because of its stylistic neutrality. The formulae are bracketed in order that the notation of all COMB^s be uniform, but the brackets are only necessary for the longer COMB^s in which they indicate the scope of negation.

$$\text{(1) UQ+NEG: } \textit{Všecko neviděl} < \begin{matrix} \text{(1a) PART NEG} \\ \text{(1b) TOT NEG} \end{matrix}$$

$(1a)\rightarrow(UQ+\overline{NEG})/(NEG+\overline{UQ})$ (He did not see everything)

> By adding the negation, the QU of the UQ is lowered to an upper level of the area of EQ^s (see *TAB. 2*).
>
> The operation brings about the meaning of PART NEG which should be considered a primary meaning for the given COMB (cf. (1b)). This consideration follows from the fact that the reader, if there is no specific context, undoubtedly will think of the meaning of PART NEG (because he does not have the acoustic signals of IC and SS). MIN COMB (1a) occurs always with ICNC.

The word-order varies with the position of SS. This variability does not affect the meaning of MIN COMB (1a), but characteristically SS falls on $\overline{\text{UQ}}$ only when the word-order is NEG+$\overline{\text{UQ}}$ in order to avoid confusion with the COMB (1b) $\overline{\text{UQ}}$+NEG, bearing the meaning of TOT NEG.

(1b)→($\overline{\text{UQ}}$+NEG) (E̅v̅erything he did not see, meaning: He did not see anything)

NEG affects +POL of the UQ and changes it into −POL; +TOT QU of the UQ moves by this from the positive pole of QS to the area of NQ^s^ on the negative pole, thus it becomes −TOT QU. This transformation brings about the meaning of TOT NEG, provided that ICC is applied. With respect to the meaning of PART NEG in (1a) we consider the meaning of TOT NEG in (1b) secondary.

The indicated word-order supports the realization of the meaning (1b); another favourable factor is the semantic extent of the individual UQ^s (henceforth SE, see description of UQ^s in 2.1.).

This fact has already been stated, cf. op. cit in *NOTE 1.* The most suitable in this respect appear to be the UQ^s with the broadest SE, i.e. *všecko* and *všichni* (*všichni* being a borderline case, narrower than *všecko*, but broader than *vždycky* and *všude*).

The lexical meaning of the negated verb also contributes to the realization of the meaning of TOT NEG (cf. again the quoted article, 2.6). In short this constraint could be summarized as follows: both meanings, i.e. that of PART NEG as well as that of TOT NEG can be reached in COMB^s in which the verb has a 'positive' of 'neutral' meaning, such as to sleep, to come, to see, to turn out well, to have light on, to heat, to write, to work etc. In COMB^s where a verb is used with an inherent 'negative' meaning, such as to become ill, to worry, to lose the way, to be hungry, to be cold, to lose money, to lie etc. commonly only the meaning of PART NEG can be realized, e.g.

both meanings are possible		*only one meaning is possible*
všichni n̅e̅spali (not e̅v̅erybody slept)	*v̅šichni nespali* (e̅v̅erybody did not sleep)	*všichni n̅e̅onemocněli* (not everybody got ill)
všecko se n̅e̅podařilo (not e̅v̅erything turned out well)	*v̅šecko se nepodařilo* (e̅v̅erything failed)	*všecko n̅e̅zmrzlo* (not e̅v̅erything got frozen)

(2) EQ+NEG: *Něco neviděl*; PART NEG (He did not see something)
$\rightarrow(\mathrm{EQ}+\overline{\mathrm{N}}\mathrm{EG})$

The QU in this COMB lies higher than the QU of EQ when isolated or in connection with POS (cf. *TAB. 2*). This type of MIN COMB always occur with ICNC, but SS is fixed on $\overline{\mathrm{NEG}}$; it often forms the non-final clause in a complex sentence. The negation obligatorily follows after the EQ (this applies also to larger COMB^s). This requirement has been previously stated in op. cit. in *NOTE 1*.

The opposite order would have the same effect as with UQ^s, e.g. *všecko*: *ne+všecko* =less than everything= something; in the same way **ne+něco* =less than something=nothing. As a UQ represents a high QU on the positive pole of the QS, after the diminishing of it certain QU still remains on the positive pole. An EQ, however, represents a lower QU on the positive pole of QS; consequently, after the adding of NEG no QU is left on the positive pole (cf. 2.4. on the function of hypersyntaxis). In contrast to *všecko ne* (not everything) which means purely removing an amount from a total, *něco ne* (not something) has additionally the aspect of a specific something which is involved in the action. This semantic feature of EQ^s together with the lack of an explicit reference to a total (which is present in the meaning of UQ^s) account for the functional division between the EQ^s and UQ^s, both being able to express PART NEG in connection with negated verb.

(3) NQ+NEG: *Nic neviděl*; TOT NEG (He did not see anything)
$\rightarrow(\mathrm{NQ})+{}^{\overline{\mathrm{NEG}}/\mathrm{NEG}}+(\overline{\mathrm{NQ}})-(\overline{\mathrm{NQ}})\ {}^{\mathrm{NEG}/\mathrm{NEG}}+(\overline{\mathrm{NQ}})$

The meaning of TOT NEG in MIN COMB (3) does not depend on IC nor on the place of SS; the decisive factor in regard to the meaning is the presence of NQ. NEG in this COMB results from the demands of Czech grammar; therefore, it is a formal element and does not cause any change in MIN COMB (3).[8]

As *TAB. 1* has shown, both types of IC can be applied, depending on the FSP. The variants with ICNC are given first in the above formula. Referring to the same meaning, i.e. the meaning of TOT NEG in MIN COMB (1b), it should be asked when the formal unit NQ+NEG is used and when $\overline{\mathrm{UQ}}$+NEG (both, of course, with ICC). In my opinion, the constructions with NQ^{s} are used when one thinks about the negative amount as a whole (*nic ne*); they are much more frequent. The constructions with UQ^{s} are used in a specific situation where all parts of the negative amount are in the picture and all of them are denied (*všecko ne*).

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[8] According to these facts, I consider the particle *ne-* to be functionally different in the following cases: *Každý nespal* (Not everybody slept) and *Nikdo nespal* (Nobody slept). While in the first expression the negative particle *ne-* evidently affects the meaning of the whole COMB, in the second expression the meaning of TOT NEG is sufficiently assured by the NQ; the negative particle with the verb is redundant.

1.3. In order to make the quantitative processes clear, at the end of this section a table will be given (*TAB. 2*) with figures expressing the stated QU^{s}. The figures have the form of a circle, which is full when it represents +TOT QU (as *všecko* — everything) and empty when it represents −TOT QU (as *nic* — nothing). PART QU^{s} are figured by partially filled circles. Previous to the quantitative overview in *TAB. 2* an explanation of the data involved is necessary.

The closest to the +TOT QU is the −PART QU (partially negative) which contains an explicite reference to the +TOT QU (thus expressed by UQ+ +NEG, e.q. *všecko neviděl* — He did not see everything). Let us suppose that this −PART QU has a certain range, let it be two quantitative grades, the lower one of which should not fall under the imaginary mark of three quarters of a +TOT QU.

The −PART QU without an explicit reference to the +TOT QU (expressed by EQ+NEG, e.g. *něco neviděl* — He did not see something) has probably a greater range, let it be three quantitative grades. The highest of them would coincide with the higher grade reached in UQ+NEG but the lowest of them would come nearer to the imaginary mark of the half of a +TOT QU[9].

When the connection between a Q and NEG is realized, there arises a new entity with an inherent meaning. This meaning can best be revealed by means of comparison to an entity with a +mark, to which it is connected by a structural relationship. For this reason in the *TAB. 2* combinations with POS are included.

The closest to the −TOT QU is the +PART QU (partially positive, expressed by e.g. *něco viděl* — He saw something). I presuppose for this +PART QU also a certain quantitative gradation, let it be three grades which can represent complementary QU^{s} to that attached to −PART QU. In the comparison of the MIN COMB^{s} to the combinations which use POS, three types of relations are involved: the relationship between two TOT QU^s, one of which is −TOT QU while the other is +TOT QU (I call this relationship complete opposition), further the relationship between the two types of PART QU^s, i.e. the −PART QU and the +PART QU (this relationship I call complementary opposition). Finally, there is the relationship between the TOT QU^s and the PART QU^s, i.e. between the −PART QU and the +TOT QU, and the −TOT QU and the +PART QU (which relationship I call partial opposition; cf. *Fig. 2* below).

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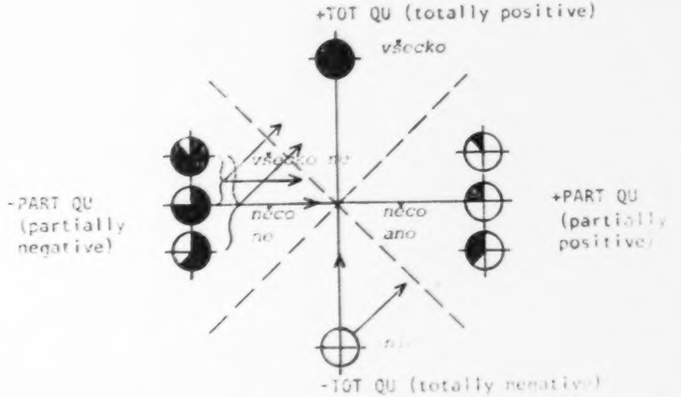
[9] Cf. the following quotation from N. V. Kossek, V. N. Kostjuk (1980:51): "*...otrica nie... možet stat' odnim iz istočnikov neopredelennosti i dvusmyslennosti...*, *a takže bolee tonkogo različenija po stepeni. Skažem* vse... *ponimaetsja v edinstvennom smysle, togda kak* ne vse... *dopuskaet različenija po stepeni: 'ni odin, malo, nemnogo, mnogo, počti vse'.*" (...negation... can become one of the sources of indefiniteness and ambiguity, and of the more subtle differentiation of the grades as well. Let us say, *everybody*... can be perceived in only one sense, while *not everybody* allows for differentiation of these grades: 'not one, a few, not many, many, almost everybody'. Transl. A. G.-R.).

Fig. 2

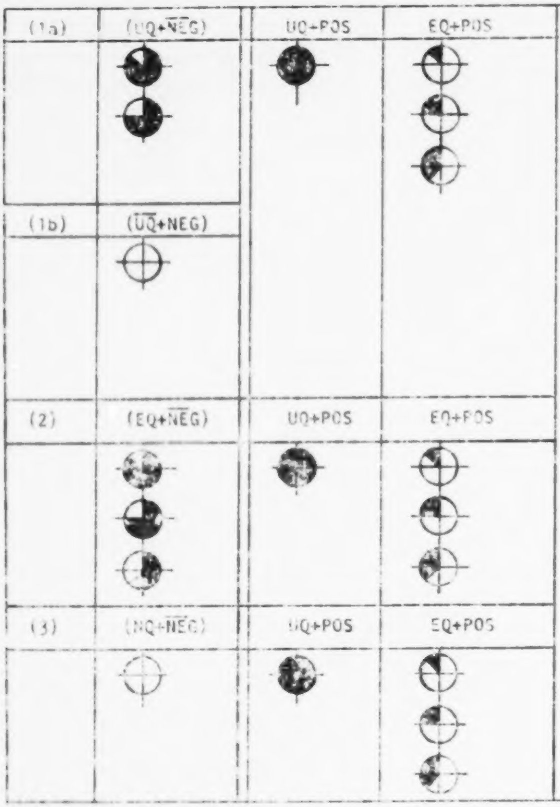

+TOT QU (totally positive)
všecko
všecko ne
-PART QU (partially negative)
něco ne
něco ano
+PART QU (partially positive)
-TOT QU (totally negative)

As to the arrangement in *TAB. 2*, when there are more possibilities of word-order and SS, only one of them is given (this because of the uniformity with the larger COMB^s for which the variation would take too much space in tables) (for TAB. 2 see. p. 144).

2.0. The larger COMB^s of Q^s and negation represent a much more complicated structure with respect to semantic and quantitative relations than MIN COMB^s did. New questions arise here: which one of the present Q^s is in the scope of negation; and, which one is the operator of negation, NEG or NQ? The properties of individual Q^s, their lexical meaning, QU and POL become very important, because the interference of them can result in the ungrammaticality of a given COMB. Also the linear order of Q^s and especially their position with respect to NEG/NQ is increasingly significant.

From the larger COMB^s I will analyse first the connection of two Q^s of the same or of different types (2.0.—2.4.). These COMB^s I call basic (BAS COMB/BAS COMB^s), because the semantic and quantitative data develop fully only when there are more than two members (MIN COMB^s have two members). In this way the BAS COMB^s form a kind of basic model. The

TAB. 2


(1a)
(UQ+$\overline{\text{NEG}}$)
UQ+POS
EQ+POS
(1b)
($\overline{\text{UQ}}$+NEG)
(2)
(EQ+$\overline{\text{NEG}}$)
UQ+POS
EQ+POS
(3)
(NQ+$\overline{\text{NEG}}$)
UQ+POS
EQ+POS

Notice that for the MIN COMB^{s} the positive quantitative correspondents are the same, but the relationships between the -entities and the +entities are different.

examination of this model yields a systematic description of the relationships involved, and also some specific features of their carriers, the Q^{s}, become more evident. This applies in the first place to the SE of the Q^{s} (see 2.1. and cf. also MIN COMB (1b)). As it does not play an important role in MIN COMB^{s}, I did not specify it there. The characterization of the Q^{s} is given below as a starting point.

2.1. From a large set of existing Q^{s} I selected the same four Q^{s} as with the MIN COMB^{s} (i.e. *všecko, všichni, vždycky, všude* for UQ^{s}; *něco, někdo, někdy, někde* for EQ^{s}; *nic, nikdo, nikdy, nikde* for NQ^{s}). Closely connected with the semantic difference between parciular Q^{s} is their SE which accounts for an obvious mutual hierarchy.

Within the group of UQ^s the widest SE has UQ *všecko* which replaces the names of material or immaterial things; sometimes it can substitute also for living creatures, possibly even human beings. UQ *všichni* has a narrower SE than *všecko*, as it replaces only the names of human beings (in specific context possibly also those of other living creatures). The narrowest SE is found with UQ^s *vždycky* and *všude*, which function as denominations of temporal and spatial data.

The difference in SE comes into the picture when the meaning of TOT NEG is to be reached by means of UQ and NEG/NQ. If the operator of negation is NEG, then the most suitable UQ in order to achieve this meaning is *všecko* and additionally, *všichni* (the two UQ^s with the widest SE). If the operator is NQ, *všecko* does not come into consideration because its SE gives to it such predominance that no NQ is able to turn it into —TOT QU. On the contrary, the UQ^s with the narrowest SE, i.e. *vždycky* and *všude* are in this case appropriate for reaching the meaning of TOT NEG as they are easily affected by the NQ with the widest SE, i.e. *nic*. In the group of EQ^s the functional division is similar to the group of UQ^s. There is the EQ *něco* which substitutes for the names of things, *někdo* substitutes for the names of human beings, *někdy* and *někde* express resp. temporal and spatial data. Despite this functional similarity the feature SE is not relevant with EQ^s. For the grammaticality of COMB^s with EQ^s their position with respect to the negative component is of primary importance.[10]

If the operator of negation is NQ, it is possible that it is not the quantitative part of the lexical meaning of EQ^s, but the deictic part that gets actualized. It points then to a specific somebody or something known from the situation (cf. BAS COMB (8), EXT COMB^s (13), (17), (18)).

In the group of NQ^s we find a corresponding division in the sentence functions, i.e. there are:*nic*, replacing names of things, *nikdo*, substituting for the names of human beings and *nikdy*, *nikde* which function as temporal and spatial denominations. In contrast to EQ^s and to some extent in accordance with UQs it is possible to establish an interior hierarchy of NQ^s following their SE. The widest SE is that of NQ *nic*; the SE of the remaining NQ^s is narrower and approximately equal for the three of them. This has consequences for the combination with UQ^s, because the NQ^s other than *nic* are less able to turn the UQ^s into —TOT QU^s. Therefore, the best way to reach the meaning of TOT NEG in combination with UQ^s is to use the NQ *nic*.

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[10] A specific restriction, concerning the connection of EQs with negative entities has been mentioned in the article, quoted in Note 1, section 2.2. There exists an interesting tendency that with a decreasing definiteness on the side of EQ, their ability to form a connection with negation also decreases, to the point of total inability.

2.2. The BAS COMB^s described below were selected following the criterion of grammaticality. I have started with a complete list of potential COMB^s in which each Q was connected with each of the other ones. I give here only the general principles of the selection, i.e. those concerning the effect of the Q in the initial position in the COMB.

a. If there is an EQ in the first position in the COMB, no restrictions are to be expected (except for the constraints of lexical meaning). When the following Q is a UQ, one and the same UQ can express both the PART NEG and TOT NEG meanings.

b. If there is a NQ int he first position, all COMB^s in which EQ^s participate, are non-grammatical. (This situation can be influenced in a positive sense by hypersyntactical relations, cf. 2.4.). In contrast to it, there are no problems when the second Q is a NQ. When the second Q in the COMB is a UQ, one and the same UQ cannot express both the PART NEG and TOT NEG meanings (cf. BAS COMB (6)). Consequently, the combination of Q^s expressing the meaning (6a) cannot be associated with the meaning (6b).

c. If the COMB starts with a UQ and the other one is of a different kind, the PART NEG or TOT NEG meaning can be expressed by that part of the COMB containing the UQ, but both meanings cannot be expressed by one and the same UQ.

As was already discussed with MIN COMB^s, IC and SS play an important role for the constitution of the meaning in the COMB^s. The two fundamental types of IC mentioned earlier are found also in BAS COMB^s; I will state the type of IC for each COMB discussed.

The word-order is also significant, on the one hand as a factor influencing the grammaticality of a COMB and on the other hand as a means of achieving a specific meaning. In all formulae, marked by an arrow →, I try to indicate some data of the operation (like I did for MIN COMB^s). It concerns the scope of negation (when the operator of negation is NQ, not NEG, the latter is put on a higher line like this: $^{\text{NEG}}$), further the position of SS and the word-order.

(4) UQ+UQ+NEG: *Vždycky všecko neviděl* ⟨ (4a) PART NEG
(4b) TOT NEG

(translation depends on the scope and on the effect of negation, see below)

The presence of two Q^s suggests the possibility of two functional situations, according the scope of negation. One of them can be such that only one UQ gets negated (4a^1), the other that both of them do (4a^2, 4b).

(4a^1)$\rightarrow$(UQ+$\overline{\mathrm{NE}}$G)+UQ/(NEG+$\overline{\mathrm{UQ}}$)+UQ (Not always did he see everything)

The formulae of (4a^1) display the most favourable word-order for the given situation. The UQ^s are interchangeable, provided that syntactic demands are respected. The meaning of PART NEG can be reached here if ICNC is applied (for the reason why a stressed UQ cannot be placed in the initial position of a COMB when ICNC is used cf. MIN COMB (4b)).

(4a^2)$\rightarrow$((UQ+UQ)+$\overline{\mathrm{NE}}$G)/(NEG+($\overline{\mathrm{UQ}}$+$\overline{\mathrm{UQ}}$)) (He did not see always everything)

In this variant of the meaning of PART NEG both UQ^s are in the scope of negation; consequently, the QU^s of both of them are changed into PART QU^s. Presumably, both are lowered to the same level, i.e. to one of the higher levels within the area of EQ^s. BAS COMB (4a^2) also is realized with ICNC. With respect to (4a), it should be added that the meaning of PART NEG — as it was with MIN COMB (1a) — has to be seen as primary compared to the meaning of TOT NEG in (4b) (or (1b)).

(4b)$\rightarrow$(($\overline{\mathrm{UQ}}$+$\overline{\mathrm{UQ}}$)+NEG) ($\overline{\text{Al}}$ways $\overline{\text{ev}}$erything he did not see, meaning: He never did see anything)

Negation affects the block of UQ^s, by which their +POL is changed into −POL; consequently, their QU dissapears from the positive pole of the QS. In my opinion, in this situation it is not possible that negation can influence only one of the UQ^s, leaving the other one free. If there is a change of the POL involved, it must concern both the UQ^s, because this modification can be realized only when ICC is applied. Therefore, the effect of negation is determined for the whole COMB. Since the UQ^s in this case form a block, it probably would be sufficient to put SS only on the first one of them (but SS on both cannot be excluded).

As to the word-order, the UQ^s have to be placed after each other, followed by NEG.

To achieve the meaning of TOT NEG it is important that the SE of the UQ^s be as large as possible (this has been stated before, cf. the description of (1b) and 2.1.). The lexical meaning of the negated verb also plays a role (see the reference in the preceding sentence). As a rule, BAS COMB^s of this type do not form any part of a complex sentence.

(5) EQ+UQ+NEG: *Někdy všecko neviděl* < (5a) PART NEG
(5b) PART NEG
(translation depends
on the scope and on
the effect of negation,
see below)

The situation in BAS COMB (5) is complicated because negation affects each one of the present Q^s in a different way when they stand separately, i.e. UQ+NEG, EQ+NEG. Therefore, I presuppose that in this type of COMB negation reaches only one of the Q^s at a time. Quantitative variations which we can state in BAS COMB (5a^{1,2}, 5b) differ little from each other, but they are interesting with respect to the changing FSP.

(5a^1)→(EQ+$\overline{\text{N}}$EG)+UQ/(EQ+(UQ)+$\overline{\text{N}}$EG) (Sometimes he did not see everything)

This variant displays the effect of NEG on the EQ. As already has been said, the QU of the whole combination EQ+NEG can be interpreted at a higher level in the area of EQ^s than the QU of an EQ as such. The UQ remains outside the scope of negation; the meaning of PART NEG is ensured by the EQ in the initial position.
The word-order as above is obligatory concerning these two components (cf. MIN COMB (2)) and it is supportive in order to indicate the FSP in (5a^1). SS is placed on $\overline{\text{N}}$EG as always when negation affects EQ^s; ICNC is applied.

(5a^2)→(UQ+(EQ)+$\overline{\text{N}}$EG)/EQ+(NEG+$\overline{\text{UQ}}$) (He did not see everything, sometimes)

In this case NEG affects the UQ and thus lowers its QU to a higher level in the area of EQ^s. Also with this variant of the meaning of PART NEG ICNC is used.
In BAS COMB (5), more than in BAS COMB (4) we are confronted with the typical problem of word-order. The question is to what extent it can function as a correlate of the semantic relations in a given COMB. From the examination of many larger COMB^s it follows that the word-order can be related with meaning only to a considerably limited extent. Generally, it is subject to various constraints and requirements, so that in particular cases it is difficult to say more about it beyond a tentative indication.

I would like to give here an example using BAS COMB (5). For the two variants of the meaning of PART NEG as in ($5a^{1,2}$), the proposed word-order is determined mainly by the following factors:

1. FSP. We can imagine two different situations for ($5a^1$) and ($5a^2$), expressed in two questions distinguished from each other by the position of SS:

($5a^1$) $\overline{\textit{V}}$*iděl někdy všecko?* < (positive answer)
Někdy všecko $\overline{\textit{ne}}$*viděl, ale*
< *skoro vždycky* / *někdy* > *viděl všecko.*

($5a^2$) *Viděl někdy* $\overline{\textit{všecko}}$*?* < (positive answer)
Všecko někdy neviděl, ale
< *skoro všecko* / *něco* > *viděl vždycky*

2. With respect to syntax, not all EQ^s and UQ^s occur with equal felicity in initial position. E.g. if we change the kind of EQ in the text of BAS COMB (5), we get a syntactically less well-shaped COMB, cf. *Něco vždycky* $\overline{\textit{ne}}$*viděl*/*Něco* $\overline{\textit{ne}}$*viděl vždycky*. As a matter of fact, this COMB would sound better with ICC and SS on the $\overline{UQ}$, but then this will yield the interpretation of (5b).

3. The placing of UQ^s in the initial position, if so demanded by the FSP, also has its specific difficulties. This position of UQ^s is characteristic for COMB^s in which the meaning of TOT NEG is to be reached (provided that ICC is applied, cf. e.g. BAS COMB (6b)). Consequently, a UQ in initial position can cause a confusion as to the intended meaning.

4. In COMB^s with EQ^s another obstacle comes into the picture: the previously mentioned rule that NEG/NQ cannot be placed in front of an EQ. For this reason the word-order is not fully reversible, cf.

Vždycky něco $\overline{\textit{ne}}$*viděl*: **Vždycky neviděl něco* (cf. 2.4.)
but *Vždycky* $\overline{\textit{ne}}$*viděl všecko.*

(5b) → ($\overline{UQ}$+(EQ)+NEG)/EQ+($\overline{UQ}$+NEG) ($\overline{\text{E}}$verything he did not see, sometimes, meaning: Sometimes he did not see anything)

Together with other COMB^s which are as a whole or partially of the type (b), the BAS COMB (5b) is realized with ICC. This means, that the negated verb is never stressed.

NEG transforms +POL of the UQ into −POL; by this its QU moves from the positive pole to the negative pole on the QS, becoming then −TOT QU. In this way, we find the meaning of PART NEG for the whole COMB while the meaning of TOT NEG is attached to the component ($\overline{UQ}$+NEG).

(6) UQ+NQ+NEG: < (6a) *Všecko nikdy neviděl*; PART NEG
(6b) *Všichni nic neviděli*; TOT NEG
(translation of both texts
depends on the effect of
negation, see below)

It is not possible to take the same UQ^s and NQ^s for the actual text in (6a) and (6b) because their interaction — as to the meaning to be achieved — depends very strongly on the particular properties of each of them.

The fact that in the combination NQ+NEG the operator of negation is the NQ, not NEG, we already have seen in MIN COMB (3); (cf. also *NOTE 5*). In BAS COMB (6) the structure is more complex because of the presence of a Q of another type but the principle remains the same. This statement finds support in the following consideration:

a. If in a COMB a NQ is used, then the negative particle ***ne-*** with the verb is only a consequence of the grammatical rules of Czech. The potential function of NEG as an operator of negation is not actualized.

Therefore we do not expect it to affect any other component in the COMB. Consequently, NEG keeps here — in the same way as POS would do — the task of providing the lexical meaning for the given predication.

b. To achieve the meaning of PART NEG and the meaning of TOT NEG, we need to know the SE of the used Q^s (see examples below). It appears that there exists a specific constraint as to the collocability of individual Q^s with respect to the meaning which can be achieved. NEG does not take part in this process.

(6a)$\rightarrow$(UQ+NQ)+$^{\overline{\text{NEG}}}$/((UQ)+$^{\text{NEG}}$+$\overline{\text{NQ}}$)–(UQ+$\overline{\text{NQ}}$)+$^{\text{NEG}}$/($\overline{\text{NQ}}$+$^{\text{NEG}}$
+(UQ)) (He never saw everything)

The NQ lowers the QU of the UQ to the level of EQ^s. In order to realize the meaning of PART NEG there is the requirement that the SE of NQ should not be wider than that of the used UQ (therefore, in principle only the UQ *všecko* comes into account for this type of COMB). Otherwise, ungrammatical COMB^s would result, e.g. **Všichni* $\overline{\textit{nic}}$ *neviděli*, **Všude* $\overline{\textit{nic}}$ *nekoupili* (cf. BAS COMB (6b)).

Except for the position of NEG in the beginning of the COMB with a following UQ, all other variations of the word-order are possible. As always when a NQ is used, both IC^s can be applied; the ICNC allowing two positions for SS, the ICC only one (cf. above formulae).

(6b)→$(\overline{\text{U}}\text{Q}+\text{NQ})+^{\text{NEG}}/((\overline{\text{U}}\text{Q})+^{\text{NEG}}+(\text{NQ}))$ ($\overline{\text{E}}$verybody saw nothing, meaning: Nobody saw anything)

Similarly as in other COMB^s with UQ^s in which the meaning of TOT NEG has been reached, negation — performed by the NQ — changes the +POL of the UQ into −POL. This means that at the same time the +TOT QU of the UQ moves from the positive pole to the negative pole of the QS. As opposed to the conditions valid in (6a), to bring about the meaning of TOT NEG, NQ^s with wide SE are required. The most effective, of course, is the NQ *nic* (nothing), which can be used with all UQ^s except for *všecko*. (The SE of *všecko* makes it so predominant that no NQ is able to change its +POL into −POL in order to achieve the meaning of TOT NEG). The NQ *nic* affects, however, the UQ *všichni* (all, everybody) which has the second widest SE (i.e, narrower than *všecko*, but wider than *vždycky* and *všude* — always everywhere). The two UQ^s with narrow SE can be modified even by the NQ *nikdo* with a considerably narrower SE than *nic*. In 2.3. I will give a review of the interrelations between UQ^s based on their SE. The word-order as given above is obligatory (only NQ and NEG are interchangeable), and of course, ICC is applied.

(7) EQ+EQ+NEG: *Někdy něco neviděl*; PART NEG
(translation depends on the
scope of negation, see below)

Similarly as in other COMB^s with more than one Q negation can influence here either one of the EQ^s or both (cf. *TAB. 3* for quantitative differences).

(7^1)→$(\text{EQ}+(\text{EQ})+\overline{\text{NEG}})$ (Sometimes he did not see something)

The above formula provides a situation where the first EQ is negated. In quantitative terms this means the possibility of interpreting its QU at a higher level than it is when the EQ stands alone. To know which one of the EQ^s is affected we should know the context (e.g. to which question the COMB provides an answer).
As to the word-order, the variability is minimal — it allows only for a mutual shift of the EQ^s — and therefore it cannot be used in order to express the semantic variation between (7^1) and (7^2). ICNC is applied.

(7^2)→$((\text{EQ}+\text{EQ})+\overline{\text{NEG}})$ (Something sometimes he did not see)

Here the situation is symbolized where both EQ^s are affected by NEG;

this makes possible the interpretation of their QU^s at a higher level. The data concerning word-order and IC are identical as in (7^1).

Both variants of BAS COMB (7) can occur as a non-final clause in a complex sentence.

(8) EQ+NQ+NEG: *Někdy neviděl nic*; PART NEG (Sometimes he saw nothing)

$$\rightarrow(EQ+NQ)+^{\overline{NEG}}/((EQ)+^{NEG}+\overline{NQ})-(EQ+\overline{NQ})+^{NEG}/((EQ)+^{NEG}+\overline{NQ})$$

As in the BAS COMB (6) we suppose that here, too, the operator of negation is NQ. However, the effect of it is different from that in BAS COMB (6). From the analysis of the quantitative relations in this COMB appeared that the NQ actualizes not the quantitative part of the meaning of the EQ, but the deictic part, pointing to 'specific somebody', 'specific something' etc. (cf. 2.1.). Potentially, the same effect on EQ^s might have also NEG, but in the majority of cases NEG will actualize the quantitative part of the meaning of the EQ^s involved. Cf.

Někdo nespal (=a certain amount of the present people did not sleep) × *Někdo nikdy nespal* (=certain person never did sleep)

Něco neviděl (=a certain amount of possible things he did not see) × *Něco nikdy neviděl* (=certain thing he never saw)

The difference in the effect of NQ^s on UQ^s as compared to the effect on EQ^s can be thus summarized as follows: the connection of

NQ+UQ results in < a lowering of the QU of the UQ or
the change of the +POL of the UQ into the −POL,

but the connection of NQ+EQ results in the actualization of the feature 'definiteness' on the part of the EQ. Consequently, the QU of the EQ stays unchanged in this case.

The negative component of BAS COMB (8) must always follow the EQ (see, however, for influence of hypersyntaxis in 2.4.).

Similarly as in BAS COMB (6a), ICNC as well as ICC can be applied.

(9) NQ+NQ+NEG: *Nikdy nic neviděl*; TOT NEG (He never saw anything)

$$\rightarrow(NQ+NQ)+^{\overline{NEG}/NEG}+(\overline{NQ}+\overline{NQ})-(\overline{NQ}+\overline{NQ})+^{NEG/NEG}+(\overline{NQ}+\overline{NQ})$$

The meaning of TOT NEG results in BAS COMB (9) — as in MIN COMB (3) — from the presence of the NQ^s.

Both IC^{s}, ICNC and ICC can be applied to this type of COMB. The word-order is as indicated above. NEG can also be found in the initial position of the COMB if it is appropriate with respect to FSP.

2.3. From the analysis of BAS COMB^{s} it follows that when in a COMB a NQ is used, it becomes the operator of negation. As we have seen, there are some functional differences between the two kinds of operators — NEG and NQ. In this section I would like to summarize these differences. Besides those concerning EQ^{s} which I have discussed ad BAS COMB (8), striking differences appear in BAS COMB^{s} with UQ^{s} (cf. (6)). The two potential meanings attached to the combination of negation with UQ^{s} are not achievable to the same extent by both operators. When the operator is NEG, in principle, both meanings can be reached with all UQ^{s} (although the UQ^{s} with a wide SE, i.e. *všecko* and *všichni* are the most frequent ones in COMB^{s} bearing the meaning of TOT NEG).

When the operator is NQ, the situation is more complex because we have to take into consideration the SE of the used Q^{s}. The SE accounts for the rules which lead to the realization of the two potential meanings. In order to reach the meaning of PART NEG, all UQ^{s} can be used if the operator has a narrower SE than the NQ *nic*. The wide SE of *nic* confers on it a strong predominance, so that when used, it turns the +POL of the UQ into —POL (with the exception of the UQ *všecko*; no single NQ can turn its +POL into —POL and therefore the meaning of TOT NEG cannot be brought about with *všecko* +NQ).

For the meaning of TOT NEG, only the UQ^{s} with a narrower SE than *všecko* are suitable. The best result is reached when the operator has as wide SE as possible, thus with NQ *nic* (if the UQ^{s} with a narrow SE are used, i.e. *vždycky* and *všude*, the NQ *nikdo* (nobody) can also be operable).

The scheme below (*TAB. 3*) shows the difference between the almost general effect of NEG and the considerably specific effect of NQ.

TAB. 3

<table>
<tr><th>NQ</th><th>NEG</th></tr>
<tr><td>$\begin{array}{l}\textit{všecko}\\ \textit{všichni}\\ \textit{vždycky}\\ \textit{všude}\end{array} + \begin{array}{l}\overline{\textit{nikdo}}\\ \overline{\textit{nikdy}}\\ \overline{\textit{nikde}}\end{array} : \text{PART NEG}$
NQs should not prevail over the UQs</td><td rowspan="2">$\left.\begin{array}{l}\textit{všecko} + \text{NEG}\\ \textit{všichni} + \text{NEG}\\ \textit{vždycky} + \text{NEG}\\ \textit{všude} + \text{NEG}\end{array}\right\} \begin{array}{l}\nearrow \text{PART NEG}\\ \searrow \text{TOT NEG}\end{array}$
Restrictions can result from the SE and from the lexical meaning of NEG</td></tr>
<tr><td>$\begin{array}{l}\overline{\textit{všichni}}\\ \overline{\textit{vždycky}}\\ \overline{\textit{všude}}\end{array} + \textit{nic} : \text{TOT NEG}$
NQ should prevail over the UQs (but *všecko* always prevail over NQs)</td></tr>
</table>

2.4. Combinations which are subject to negation often occur as a part of a complex sentence. The clause which accompanies the given COMB can in some cases (a) supply more quantitative information, e.g. *Všecko vždycky neviděl, ale někdy viděl všecko* (He did not always see everything, but sometimes he saw everything). In other cases it can (b) specify the used Q to which it is joined, with respect to its non-quantitative features, e.g. *Nikdy neviděl všecko, co chtěl* (He never saw everything he wanted to).

In both the types of complex sentences the COMB^s with EQ^s can be found and this has remarkable consequences for the word-order and SS in it. As already has been stated, the EQ always precede the negative component; yet when the COMB with EQ^s is a part of a complex sentence, the negative component goes ahead the EQ. In this specific case a strong SS is placed on the $\overline{EQ}/\overline{EQ}^s$, cf.

(a) **Nezkazil někdy něco*>*Nezkazil n̅ěkdy n̅ěco, ale v̅ždycky v̅šecko.*
(He did not spoil s̅omething s̅ometimes
but e̅verything a̅lways)

(b) **Nikdy neudělal něco*>*Nikdy neudělal něco, co by nemohl zodpovědět.*
(He never did something which he could not
justify)

2.5. To conclude the discussion of the processes in BAS COMB^s we give a table of the actualized QU^s, as compared to the QU^s in combinations in which POS is used. The visual representation is the same as in *TAB. 2*; notice, however that with BAS COMB^s containing NQ the possibility to get permutations of the QU^s at the +side is increasing (cf. BAS COMB^s (6) and (9)). If the permutations at the +side are the same for the variants of one BAS COMB, they are not repeated. For *TAB. 4* see the appendix.

3.0. The Czech language system makes possible still larger COMB^s than the BAS COMB^s, although they are less frequently used. They consist of three Q^s of the same or of different kind and NEG; I call them extended COMB^s (EXT COMB/EXT COMB^s). They are subject to various restrictions on their occurrence because the accumulation of semantic features of the individual Q^s reduces their mutual collocability. Moreover, the complex syntactic structure of EXT COMB^s entails specific constraints as to the position of the Q^s in it.

In EXT COMB^s with Q^s of the same kind there is an increasing tendency to form a semantic block. Inside this block the differences in the lexical meaning between the individual Q^s somewhat recede, while that part of the lexical meaning which is common to the given Q^s becomes more prominent. As the common element is repeated three times (e.g. *všichni vždycky všecko* — everybody always everything) it results in an emphasis which is a typical function of these EXT COMB^{s}.[11]

In EXT COMB^{s} with Q^{s} of a different kind, the whole meaning is not always clear. The meanings of each component are evaluated and amalgamated, and an increase in the content of a COMB can render the meaning of it less perspicuous.

In the following description of the operations in EXT COMB^{s} we proceed in the same way as with MIN COMB^{s} and BAS COMB^{s}. All occurring types of EXT COMB^{s} will be discussed. However, since most processes are similar to those in the previous two groups of COMB^{s}, I regularly refer to the corresponding MIN COMB^{s} and BAS COMB^{s}.

3.1. We start with EXT COMB^{s} in which UQ^{s} are used.

(10) UQ+UQ+UQ+NEG: *Všichni vždycky všecko neviděli*; PART NEG
(translation depends on the scope
of negation, see below)

In contrast with BAS COMB (4), the assignment of the meaning of TOT NEG to this COMB is not allowed for. In theory, it cannot be excluded (in case that there is ICC applied and an emphatic SS on all three UQ^{s}). Yet the situation in which EXT COMB (10) would occur with this meaning is very unusual and for that reason I do not include the description of the variant (10b) (but I include it in *TAB. 5, 6* and *7*). The presence of three Q^{s} gives rise to the presupposition that the scope of negation can have three variations. These variations, however, show only slight differences in QU, but can be utilized in order to meet the demands of FSP.

(10a^{1})→(UQ+$\overline{\text{NEG}}$)+UQ+UQ/UQ+UQ+(NEG+$\overline{\text{UQ}}$) (Not everybody saw always everything)

The lowered UQ takes up position at the higher level in the area of EQ^{s}, while the other two UQ^{s} keep their QU unchanged. The UQ^{s} are to a considerable extent interchangeable and therefore they are not numbered in the formulae. Like in BAS COMB (4), the word-order have some possibilities to indicate the scope of negation, e.g. by placing the stressed $\overline{\text{NEG}}$ after the affected UQ/UQ^{s} or, when the SS is on $\overline{\text{UQ}}$/$\overline{\text{UQ}}^{s}$, before it. ICNC is applied.

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[11] With regard to UQs and NQs there are situations imaginable where — for the sake of an exaggerated reaction — all four of them will be used in one COMB, e.g. *Všichni vždycky všude všecko neviděli*, *Nikdo nikdy nikde nic neviděl* (Everything always everywhere everybody did not see, Nobody ever saw anything anywhere).

$(10a^2) \rightarrow ((UQ+UQ)+\overline{NEG})+UQ/UQ+(NEG+(\overline{UQ}+\overline{UQ}))$ Everybody always did not see everything)

In this situation it is possible to put NEG after the block of UQ^s; by this the QU is lowered to the higher level in the area of EQ^s. Like in (10a^1) ICNC is applied.

$(10a^3) \rightarrow ((UQ+UQ+UQ)+\overline{NEG})/(NEG+(\overline{UQ}+\overline{UQ}+\overline{UQ})$ (Everything always everybody did not see)

In the semantic variant (10a^3) the QU of the three UQ^s as a block is brought down to the higher level in the area of EQ^s. Here the word-order can also indicate the scope of negation; ICNC is used and SS is distributed in an analogical way as in (10a^1) and (10a^2). Yet it should be added that this specific word-order fulfils the function of emphasis which we marked as typical for EXT COMB^s with Q^s of the same type.

(11) $EQ+UQ+UQ+NEG$: *Někdy všichni všecko neviděli* < (11a) PART NEG / (11b) PART NEG

(translation depends on the scope and on the effect of negation, see below)

There are many possibilities for the effect of negation in EXT COMB (11). It can influence either a single UQ or both UQ^s and it can join the EQ. The last mentioned case will be our starting point.

$(11a^1) \rightarrow (EQ+(UQ+UQ)+\overline{NEG})/(EQ+\overline{NEG})+UQ+UQ$ (Sometimes did not everybody see everything)

The operation is here analogical to that in BAS COMB (5a^1) (but in EXT COMB (11a^1) there are two UQ^s outside the scope of negation). The data as to the IC, word-order and SS are identical.

$(11a^2) \rightarrow (UQ+(EQ+UQ)+\overline{NEG})/EQ+UQ+(NEG+\overline{UQ})$ (Not everybody saw everything, sometimes)

The EXT COMB (11a^2), too, is analogical to BAS COMB (5a^2). Here besides the EQ one of the UQ^s is left unaffected. The IC, word-order and position of SS are identical as in (5a^2).

$(11a^3) \rightarrow ((UQ+UQ)+(EQ)+\overline{NEG})/EQ+(NEG+(\overline{UQ}+\overline{UQ}))$ (Everybody everything did not see, sometimes)

The result of the operation in (11a^3) is the lowering of both +TOT QU^s to the higher level in the area of EQ^s. The QU of the EQ remains

unchanged, i.e. it is found at the lower level in the area of EQ^s. In addition to what already has been said on BAS COMB (5), I would like to stress that the indication of word-order, as given ad (11a^1, ^{2}, ^{3}) only tries to bring the possibilities of linear arrangement in relation with the scope of negation. Yet it is not possible to consider the variants in word-order to be the correlates of the semantic variants actualized in (11a^1, ^{2}, ^{3}).
In general, depending on the word-order and on the choice of Q^s, some COMB^s of this type have less semantic perspicuity, cf. *Všichni někdy všecko n̄eviděli* (while *Někdy všichni všecko n̄eviděli* or *Někdy neviděli v̄šichni všecko* is much clearer due to the connection of the two UQ^s).

(11b) $\to((\overline{UQ}+\overline{UQ})+(EQ)+NEG)/EQ+((\overline{UQ}+\overline{UQ})+NEG)$ (Ēverybody everything did not see, sometimes, meaning: Nobody saw anything, sometimes)

The process in EXT COMB (11b) is analogous to that in BAS COMB (5b). While the presence of the EQ guarantees the meaning of PART NEG for the whole COMB, the meaning of TOT NEG is assigned to the components $((\overline{UQ}+\overline{UQ})+NEG)$. Of course, ICC is applied.

(12) EQ+EQ+UQ+NEG: *Někdy někdo všecko neviděl* $\left\langle\begin{array}{l}\text{(12a) PART NEG}\\ \text{(12b) PART NEG}\end{array}\right.$

(translation depends on the scope and on the effect of negation, see below)

With this type of COMB I take into account three possible effects of negation; first we will pay attention to the situation where one EQ gets negated.

(12a^1) $\to(EQ+(EQ+UQ)+\overline{NEG})$ (Sometimes did not somebody everything see)

For the relationships in EXT COMB (12a^1) I refer to the BAS COMB (5a^1). In contrast to it, it is not possible to place NEG immediately after the first EQ (which is affected by negation) as in (5a^1) or in (11a^1), because of the specific restriction on the sequence EQ—NEG (cf. MIN COMB (2) and BAS COMB (5a^1). Therefore, and because of the fact that in COMB^s with EQ^s SS always is on $\overline{NEG}$, we have only one possibility of linear arrangement. EXT COMB (12a^1) is realized with ICNC.

(12a²) $\rightarrow((EQ+EQ)+\overline{NE}G)+UQ$ (Sometimes somebody did not see everything)

In EXT COMB (12a²) we suppose that both EQˢ, as a block, are affected by NEG. The QUˢ of both fo them are brought at a level which is higher than when the EQˢ remain outside the scope of negation. Here, again, one possibility of linear arrangement is given because of the same constraints as above (e.g. $*UQ+(\overline{NE}G+(EQ+EQ))$, cf. (11a³)). ICNC is applied.

(12a³) $\rightarrow(UQ+(EQ+EQ)+\overline{\overline{NE}}G)/EQ+EQ+(NEG+\overline{\overline{UQ}})$ (Everything sometimes somebody did not see)

In this variant NEG affects the UQ; by this its +TOT QU is lowered to the higher level in the area of EQˢ. ICNC is used.

(12b) $\rightarrow(\overline{UQ}+(EQ+EQ)+NEG)/EQ+EQ+(\overline{UQ}+NEG)$ ($\overline{E}$verything sometimes somebody did not see, meaning: Sometimes somebody did not see anything)

In this variant of EXT COMB (12) the negation operates analogically as in the BAS COMB (5b). ICC is used.

(13) $EQ+UQ+NQ+NEG <$
(13a) *Někdo všecko nikdy neviděl*; PART NEG
(13b) *Někdy všichni nic neviděli*; PART NEG
(translation of both texts
depends on the scope and on
the effect of negation, see
below)

For the difference between the actual texts ad (13a) and (13b) see the description of BAS COMB (6) and the explanation on the relationship of UQ to NQ in 2.3. The effect of negation in this COMB is directed either towards the EQ (13a¹) or towards the UQ in which case — as usual — two different results are obtained (13a², 13b).

(13a¹) $\rightarrow(EQ+(UQ)+NQ)+^{\overline{NE}G}/(EQ+(UQ)+^{NEG}+\overline{NQ})-(EQ+(UQ)+\overline{NQ})+^{NEG}/(EQ+\overline{NQ}+^{NEG}+(UQ))$ (Somebody never saw everything)

For EXT COMB (13a¹) I suppose the identical effect of negation as for BAS COMB (8). The actualization of NQ creates a considerable variation with respect to the word-order (still more possibilities than figured above) and confirm to the rule, there are both IC^s and the double position for SS.

(13a^2)$\rightarrow \mathrm{EQ}+(\mathrm{UQ}+\mathrm{NQ})+^{\overline{\mathrm{NEG}}}/\mathrm{EQ}+((\mathrm{UQ})+^{\mathrm{NEG}}+\overline{\mathrm{NQ}})-\mathrm{EQ}+(\mathrm{UQ}+\overline{\mathrm{NQ}})$
$+^{\mathrm{NEG}}/\mathrm{EQ}+(\overline{\mathrm{NQ}}+^{\mathrm{NEG}}+(\mathrm{UQ}))$ (Somebody everything never saw)

For the relationships in this variant of EXT COMB (13) I refer to the description of BAS COMB (6a). Similarly, both IC^s can be applied and therefore the full choice of positions for SS is assured.

(13b)$\rightarrow \mathrm{EQ}+(\overline{\mathrm{UQ}}+\mathrm{NQ})+^{\mathrm{NEG}}/\mathrm{EQ}+((\overline{\mathrm{UQ}})+^{\mathrm{NEG}}+\mathrm{NQ})$ (Sometimes everybody saw nothing, meaning: Sometimes nobody saw anything)

While the meaning of (13b) as a whole is PART NEG, in the component $(\overline{\mathrm{UQ}}+\mathrm{NQ})$ the meaning of TOT NEG is realized. The operation is in all respects analogical to that in BAS COMB (6b).

(14) UQ+UQ+NQ+NEG < (14a) *Všichni všecko nikdy neviděli*; PART NEG
(14b) *Všichni vždycky nic neviděli*; TOT NEG
(translation of both texts depends
on the scope and on the effect of
negation, see below)

As result of the interrelations between UQ^s and NQ^s, the actual texts for EXT COMB^s (14a) and (14b), again, cannot be identical (cf. also BAS COMB (6)). In order to reach the meaning of PART NEG with the given type of Q^s in (14a), the UQ^s should have predominance over the NQ and vice versa. (UQ *všichni* is a borderline case; for (14a) the greater weight is brought in by the UQ *všecko*, for (14b) by the NQ *nic*).

Because of the presence of two UQ^s, it can be assumed that either one or both will be in the scope of negation, in correspondence with the demands of FSP.

(14a^1)$\rightarrow(\mathrm{UQ}+\mathrm{NQ})+\mathrm{UQ}+^{\overline{\mathrm{NEG}}}/((\mathrm{UQ})+^{\mathrm{NEG}}+(\mathrm{UQ})+^{\overline{\mathrm{NQ}}})-(\mathrm{UQ}+\overline{\mathrm{NQ}})+^{\mathrm{NEG}}+$
$\mathrm{UQ}/\overline{\mathrm{NQ}}+\mathrm{UQ})+^{\mathrm{NEG}}+\mathrm{UQ}$ (Everybody never saw everything)

The QU of the UQ in the scope of negation is lowered to the higher level in the area of EQ^s. Similarly as in BAS COMB (6a), both IC^s can be applied.

(14a^2) $\rightarrow ((\mathrm{UQ}+\mathrm{UQ})+\mathrm{NQ})+^{\overline{\mathrm{NEG}}}/((\mathrm{UQ}+\mathrm{UQ})+^{\mathrm{NEG}}+\overline{\mathrm{NQ}})-((\mathrm{UQ}+\mathrm{UQ})+\overline{\mathrm{NQ}})$ $+^{\mathrm{NEG}}/((\overline{\mathrm{NQ}})+^{\mathrm{NEG}}+(\mathrm{UQ}+\mathrm{UQ}))$ (Everybody everything never saw)

The effect of negation in EXT COMB (14a^2) conforms to the rule. In an analogical way as in EXT COMB (11a^2), the lowering of the QU of the UQ^s takes them to the same level, i.e. to one of the upper levels in the area of EQ^s. For these types of COMB^s I do not suppose a gradation of the newly reached QU^s because it would not be functional.

(14b) $\rightarrow ((\overline{\mathrm{UQ}}+\overline{\mathrm{UQ}})+\mathrm{NQ})+^{\mathrm{NEG}}/((\overline{\mathrm{UQ}}+\overline{\mathrm{UQ}})+^{\mathrm{NEG}}+(\mathrm{NQ}))$ ($\overline{\text{Ev}}$erybody $\overline{\text{al}}$ways saw nothing, meaning: Nobody ever saw anything)

The two UQ^s are in the scope of negation as a block which results in the change of their +POL into −POL and consequently of their +TOT QU into −TOT QU. This process take place if ICC is used (and both $\overline{\mathrm{UQ}}^s$ bear SS, the first one having most often an emphatic SS).

(15) UQ+NQ+NQ+NEG < (15a) *Všecko nikdy nikdo neviděl*; PART NEG
(15b) *Všichni nikdy nic neviděli*; TOT NEG
(translation of both texts depends on the scope and on the effect of negation, see below)

As to the selection of UQ^s with respect to NQ^s the same principles are valid as a.o. in EXT COMB (14). Consequently, two different actual texts for (15a) and (15b) are needed. The function of the operator of negation is fulfilled here by the block of NQ^s.

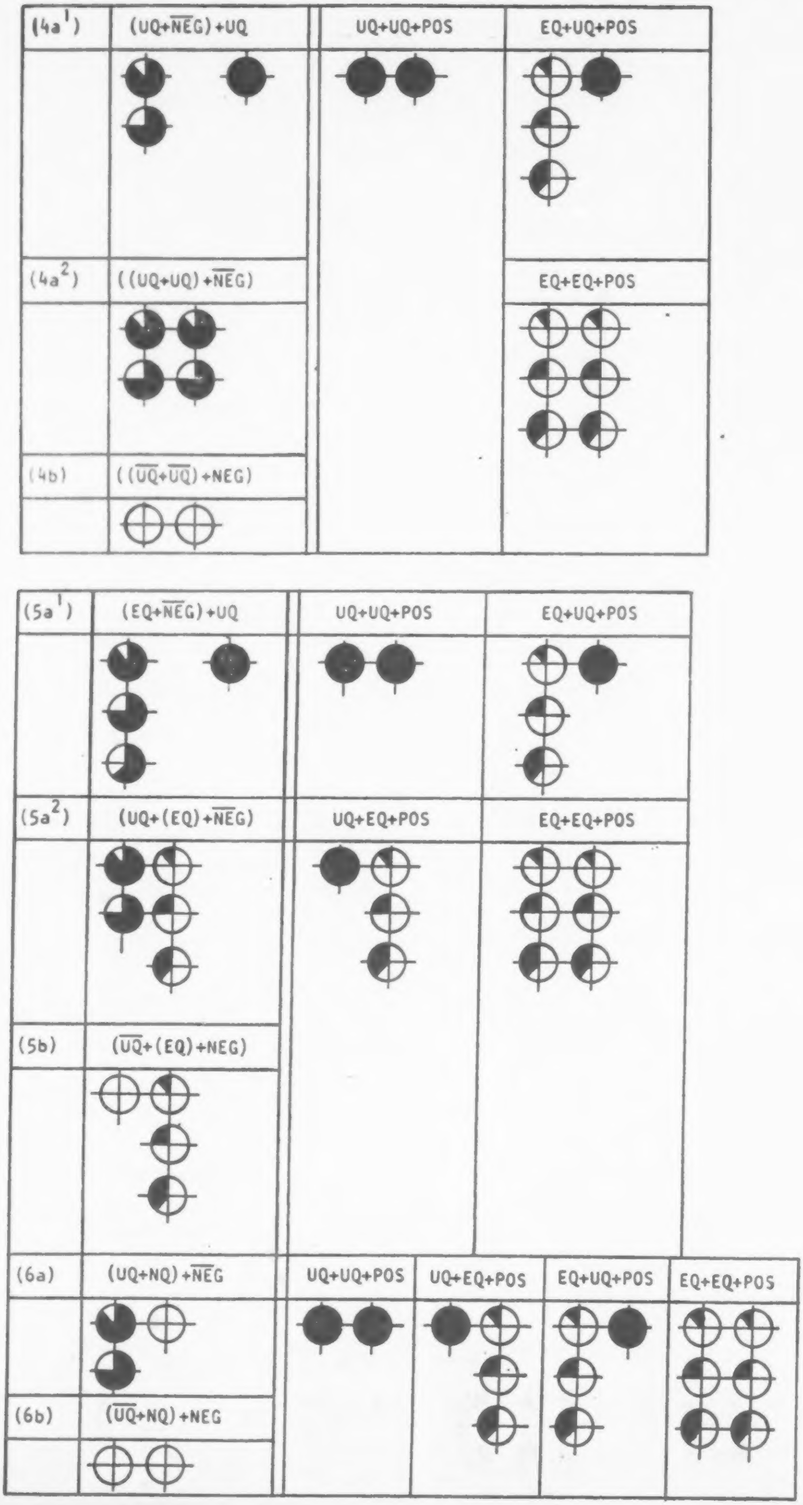
(15a) $\rightarrow (\mathrm{UQ}+(\mathrm{NQ}+\mathrm{NQ}))+^{\overline{\mathrm{NEG}}}/((\mathrm{UQ})+^{\mathrm{NEG}}+(\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}}))-(\mathrm{UQ}+(\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}})$ $+^{\mathrm{NEG}}/((\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}})+^{\mathrm{NEG}}+(\mathrm{UQ}))$ (Nobody ever saw everything)

Similarly as in the foregoing COMB^s there is considerable variability in the word-order; in particular, NEG is movable (though it cannot be placed in the initial position nor between the NQ^s), EXT COMB (15a) comes into account for the purpose of emphasis. As the above formulae show, both IC^s are applicable.

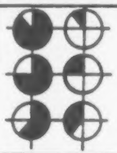
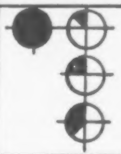
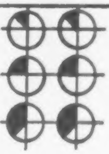
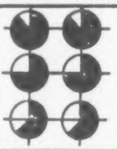
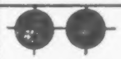
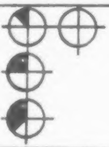
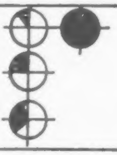
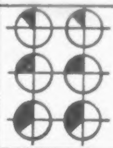
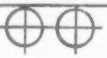
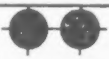
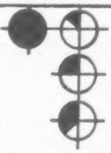
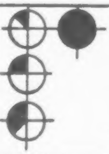
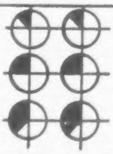
(15b) $\rightarrow (\overline{\mathrm{UQ}}+(\mathrm{NQ}+\mathrm{NQ}))+^{\mathrm{NEG}}/((\overline{\mathrm{UQ}})+^{\mathrm{NEG}}+(\mathrm{NQ}+\mathrm{NQ}))$ ($\overline{\text{Ev}}$erything never anybody saw, meaning: Never anybody saw anything)

The block of NQ^s, one of which is the more prominent one, i.e. *nic*, influences the UQ in an analogical way as in BAS COMB (6b) and

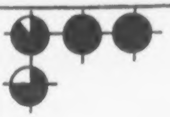
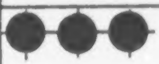
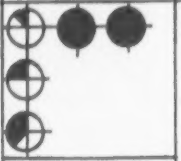
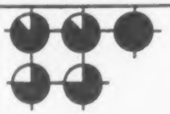
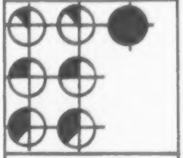
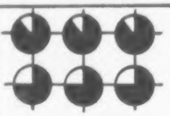
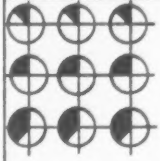
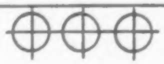
TAB. 4

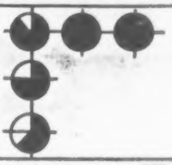
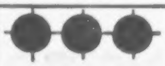
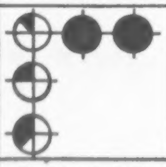
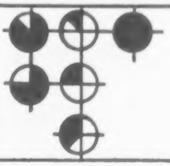
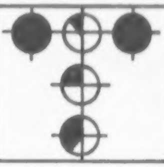
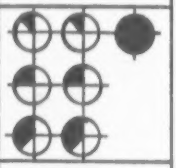
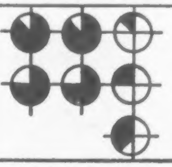
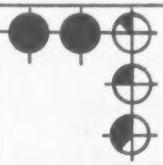
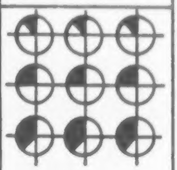
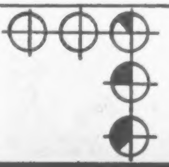

(4a^1)
(UQ+$\overline{\text{NEG}}$)+UQ
UQ+UQ+POS
EQ+UQ+POS
(4a^2)
((UQ+UQ)+$\overline{\text{NEG}}$)
EQ+EQ+POS
(4b)
(($\overline{\text{UQ}}$+$\overline{\text{UQ}}$)+NEG)
(5a^1)
(EQ+$\overline{\text{NEG}}$)+UQ
UQ+UQ+POS
EQ+UQ+POS
(5a^2)
(UQ+(EQ)+$\overline{\text{NEG}}$)
UQ+EQ+POS
EQ+EQ+POS
(5b)
($\overline{\text{UQ}}$+(EQ)+NEG)
(6a)
(UQ+NQ)+$\overline{\text{NEG}}$
UQ+UQ+POS
UQ+EQ+POS
EQ+UQ+POS
EQ+EQ+POS
(6b)
($\overline{\text{UQ}}$+NQ)+NEG

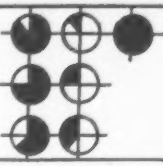
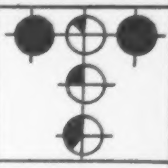
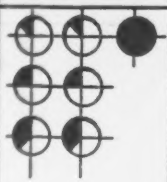
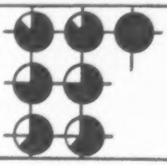
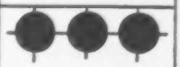
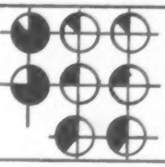
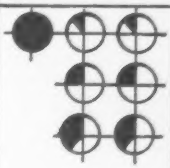
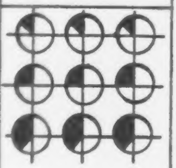
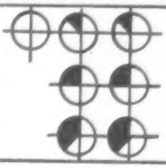
cont.of *TAB.4*

(7^1)	(EQ+(EQ)+$\overline{\text{NEG}}$)	UQ+EQ+POS	EQ+EQ+POS		
					
(7^2)	((EQ+EQ)+$\overline{\text{NEG}}$)	UQ+UQ+POS			
					
(8)	(EQ+NQ)+$\overline{\text{NEG}}$	EQ+UQ+POS	EQ+EQ+POS		
					
(9)	(NQ+NQ)+$\overline{\text{NEG}}$	UQ+UQ+POS	UQ+EQ+POS	EQ+UQ+POS	EQ+EQ+POS
					

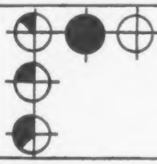
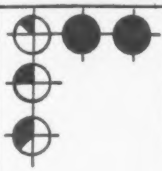
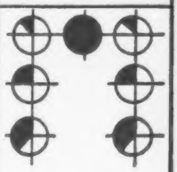
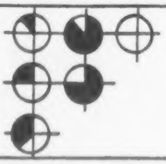
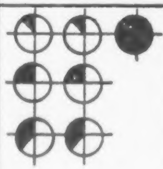
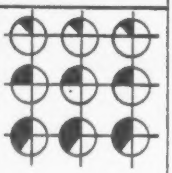
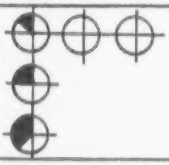
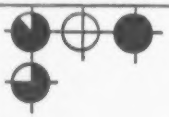
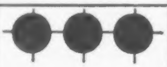
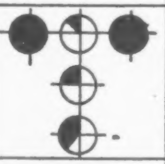
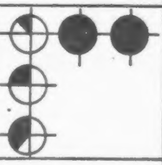
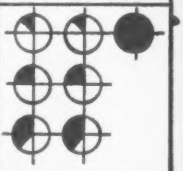
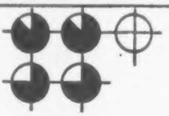
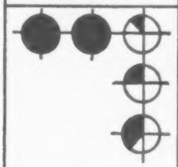
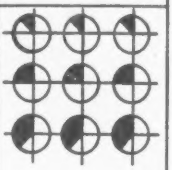
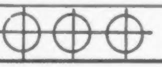
TAB. 5

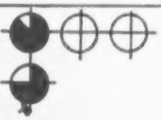
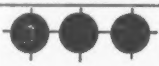
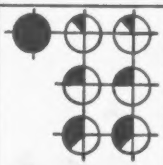
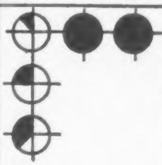
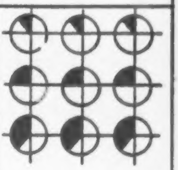
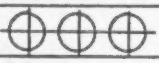
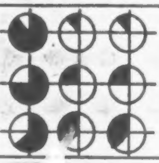
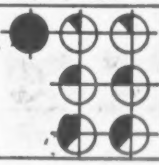
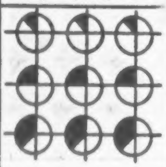
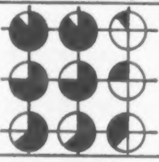
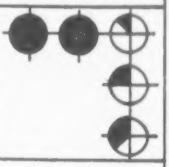
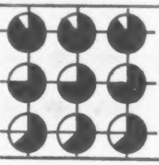
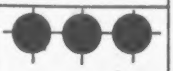
(10a^1)	(UQ+$\overline{NEG}$)+UQ+UQ	UQ+UQ+UQ+POS	EQ+UQ+UQ+POS	
				
(10a^2)	((UQ+UQ)+$\overline{NEG}$)+UQ		EQ+EQ+UQ+POS	
				
(10a^3)	((UQ+UQ+UQ)+$\overline{NEG}$)		EQ+EQ+EQ+POS	
				
(10b)	(($\overline{UQ}$+$\overline{UQ}$+$\overline{UQ}$)+NEG)			
				

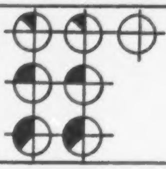
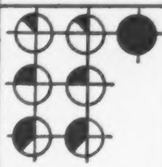
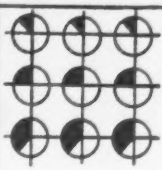
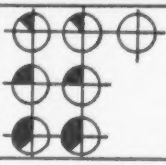
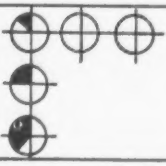
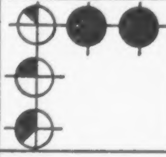
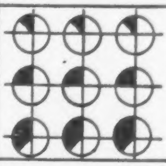
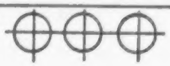
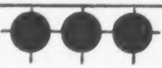
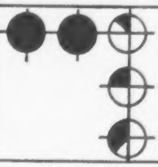
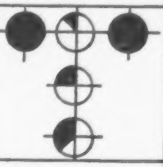
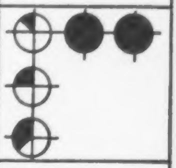
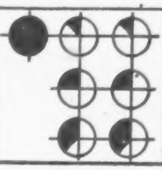
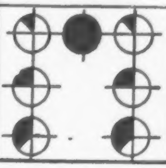
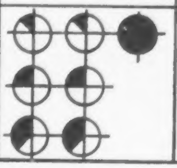
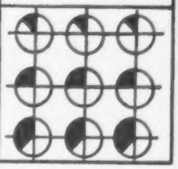
(11a^1)	(EQ+(UQ+UQ)+$\overline{NEG}$)	UQ+UQ+UQ+POS	EQ+UQ+UQ+POS	
				
(11a^2)	(UQ+(EQ+UQ)+$\overline{NEG}$)	UQ+EQ+UQ+POS	EQ+EQ+UQ+POS	
				
(11a^3)	((UQ+UQ)+(EQ)+$\overline{NEG}$)	UQ+UQ+EQ+POS	EQ+EQ+EQ+POS	
				
(11b)	(($\overline{UQ}$+$\overline{UQ}$)+(EQ)+NEG)			
				

(12a^1)	(EQ+(EQ+UQ)+$\overline{NEG}$)	UQ+EQ+UQ+POS	EQ+EQ+UQ+POS		
					
(12a^2)	((EQ+EQ)+$\overline{NEG}$)+UQ	UQ+UQ+UQ+POS			
					
(12a^3)	(UQ+(EQ+EQ)+$\overline{NEG}$)	UQ+EQ+EQ+POS	EQ+EQ+EQ+POS		
					
(12b)	($\overline{UQ}$+(EQ+EQ)+NEG)				
					

TAB. 5 cont.

($13a^1$)	(EQ+(UQ)+NQ)+$\overline{\text{NEG}}$			EQ+UQ+UQ+POS	EQ+UQ+EQ+POS
					
($13a^2$)	EQ+(UQ+NQ)+$\overline{\text{NEG}}$	EQ+EQ+UQ+POS	EQ+EQ+EQ+POS		
					
(13b)	EQ+($\overline{\text{UQ}}$+NQ)+NEG				
					
($14a^1$)	(UQ+NQ)+UQ+$\overline{\text{NEG}}$	UQ+UQ+UQ+POS	UQ+EQ+UQ+POS	EQ+UQ+UQ+POS	EQ+EQ+UQ+POS
					
($14a^2$)	((UQ+UQ)+NQ)+$\overline{\text{NEG}}$		UQ+UQ+EQ+POS	EQ+EQ+EQ+POS	
					
(14b)	(($\overline{\text{UQ}}$+$\overline{\text{UQ}}$)+NQ)+NEG				
					

(15a)	(UQ+(NQ+NQ))+$\overline{NEG}$	UQ+UQ+UQ+POS	UQ+EQ+EQ+POS	EQ+UQ+UQ+POS	EQ+EQ+EQ+POS
					
(15b)	($\overline{UQ}$+(NQ+NQ))+NEG				
					
(16^1)	(EQ+(EQ+EQ)+$\overline{NEG}$)	UQ+EQ+EQ+POS	EQ+EQ+EQ+POS		
					
(16^2)	((EQ+EQ)+(EQ)+$\overline{NEG}$)	UQ+UQ+EQ+POS			
					
(16^3)	((EQ+EQ+EQ)+$\overline{NEG}$)	UQ+UQ+UQ+POS			
					

(17^1)	(EQ+(EQ)+NQ)+$\overline{\text{NEG}}$	EQ+EQ+UQ+POS	EQ+EQ+EQ+POS		
					
(17^2)	((EQ+EQ)+NQ)+$\overline{\text{NEG}}$				
					
(18)	((EQ)+(NQ+NQ))+$\overline{\text{NEG}}$	EQ+UQ+UQ+POS	EQ+EQ+EQ+POS		
					
(19)	(NQ+NQ+NQ)+$\overline{\text{NEG}}$	UQ+UQ+UQ+POS	UQ+UQ+EQ+POS	UQ+EQ+UQ+POS	EQ+UQ+UQ+POS
					
		UQ+EQ+EQ+POS	EQ+UQ+EQ+POS	EQ+EQ+UQ+POS	EQ+EQ+EQ+POS
					

in EXT COMB (14b). The meaning of TOT NEG should — as in (6b) — be considered secondary with respect to the meaning of PART NEG as in (15a). In order to reach the meaning of TOT NEG, the ICC should be applied.

(16) EQ+EQ+EQ+NEG: *Někdy někdo něco neviděl*; PART NEG
(translation depends on the
scope of negation, see below)

In EXT COMB (16) negation can influence either one, or two or all EQ^s (cf. BAS COMB (7)). This operational difference can bring about only a slight gradation of the QU^s involved. In *TAB. 5* (comes at the end of this description) I will show these mutations in individual EXT COMB^s. In my opinion, it is not possible to perceive the gradation as such. Notwithstanding I take it into consideration, because the mutations follow from the changing FSP. This change determines which EQ really is under the effect of negation; in *TAB.* 5 we will see the actual increase of QU from the situation, figured in (16^1) to the situation figured in (16^3).

(16^1)→(EQ+(EQ+EQ)+$\overline{\text{N}}$EG) (Sometimes did not somebody something see)

The first EQ is in the scope of negation. This makes it possible to elevate its QU to a higher level than the level of the unaffected EQ^s in the block. Analogically as in BAS COMB (7) the word-order is stable and only a mutual shift between the EQ^s is to some extent possible. As usual in such a type of COMB, there is ICNC used.

(16^2)→((EQ+EQ)+(EQ)+$\overline{\text{N}}$EG) (Sometimes somebody did not something see)

Both EQ^s in the block are affected here by negation, which means a quantitative increase for the whole COMB. The word-order, IC and SS are the same as in EXT COMB (16^2).

(16^3)→((EQ+EQ+EQ)+$\overline{\text{N}}$EG) (Sometimes somebody something did not see)

In EXT COMB (16^3) the joint QU is the largest. The other data are identical as in (16^1) and (16^2).

(17) EQ+EQ+NQ+NEG: *Někdy někdo nic neviděl*; PART NEG
(translation depends on the
scope of negation, see below)

The operator of negation in EXT COMB (17) is the NQ; it affects either one or both EQ^s (cf. *TAB. 5*).

$(17^1) \rightarrow (\mathrm{EQ}+(\mathrm{EQ})+\mathrm{NQ})+{}^{\overline{\mathrm{NEG}}}/(\mathrm{EQ}+(\mathrm{EQ})+{}^{\mathrm{NEG}}+\overline{\mathrm{NQ}})-(\mathrm{EQ}+(\mathrm{EQ})+{}^{\mathrm{NEG}}+$
$\overline{\mathrm{NQ}})/(\mathrm{EQ}+(\mathrm{EQ})+\overline{\mathrm{NQ}})+{}^{\mathrm{NEG}}$ (Somebody saw nothing, sometimes)

In EXT COMB (17^1) the first EQ is in the scope of negation; for the effect of it cf. the discussion of the BAS COMB (8). The variability of the word-order, which is commonly found in COMB^s with NQ^s, is limited here. This follows from the constraint on the sequence EQ –NEG/NQ which already has been mentioned.
Similarly as in BAS COMB (8), both IC^s can be used. This makes it possible to achieve the correspondence with the given FSP.

$(17^2) \rightarrow ((\mathrm{EQ}+\mathrm{EQ})+\mathrm{NQ})+{}^{\overline{\mathrm{NEG}}}/((\mathrm{EQ}+\mathrm{EQ})+{}^{\mathrm{NEG}}+\overline{\mathrm{NQ}})-((\mathrm{EQ}+\mathrm{EQ})+{}^{\mathrm{NEG}}+$
$+\overline{\mathrm{NQ}})/((\mathrm{EQ}+\mathrm{EQ})+\overline{\mathrm{NQ}})+{}^{\mathrm{NEG}}$ (Sometimes somebody saw nothing)
In (17^2) both EQ^s are influenced; the word-order, IC and SS are identical to (17^1).

(18) EQ+NQ+NQ+NEG: *Někdy nikdo nic neviděl*; PART NEG
(Sometimes nobody saw anything)
$\rightarrow ((\mathrm{EQ})+(\mathrm{NQ}+\mathrm{NQ}))+{}^{\overline{\mathrm{NEG}}}/((\mathrm{EQ})+{}^{\mathrm{NEG}}+(\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}}))-((\mathrm{EQ})+{}^{\mathrm{NEG}}+(\overline{\mathrm{NQ}}+$
$\overline{\mathrm{NQ}}))/((\mathrm{EQ})+(\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}}))+{}^{\mathrm{NEG}}$

The effect of negation, carried out in EXT COMB (18) by the block of NQ^s, conforms to the rule on the combination of EQ^s and NQ^s (see BAS COMB (8)). Since the EQ in a simple sentence always stays in preposition of the negative component, only NEG and NQ^s can switch their positions in this type of COMB. Yet as has been stated in 2.4., the situation is different in the case of a complex sentence. For a COMB of the type as in (18), reverse word-order is then possible, cf. **Nikdo nikdy neviděl něco*>*Nikdo nikdy neviděl něco, co by už byl neznal* (Nobody ever saw anything that he was unfamiliar with)
Analogically as in EXT COMB (17), both IC^s can be used here depending on FSP. The variant with ICNC is given first in the above formulae.

(19) NQ+NQ+NQ+NEG: *Nikdo nikdy nic neviděl*; TOT NEG
(Nobody ever saw anything)
$\rightarrow (\mathrm{NQ}+\mathrm{NQ}+\mathrm{NQ})+{}^{\overline{\mathrm{NEG}}/\mathrm{NEG}}+(\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}})-(\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}})+{}^{\mathrm{NEG}/\mathrm{NEG}}$
$+(\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}}+\overline{\mathrm{NQ}})$

Like in BAS COMB (9) the meaning of TOT NEG is brought about by the NQ^s. The negated verb gives the information on the lexical meaning of the predication. The word-order is to a considerable extent variable which can be utilized according to the FSP.

As already has been stated, for this type of COMB both IC^s can be employed. When ICNC is used, SS is put either on $\overline{\text{NEG}}$ or on $\overline{\text{NQ}}$,both occupying the final position in the COMB. When ICC is used, SS is always found on one (then it is the first one) or more, often on all $\overline{\text{NQ}}^s$. This follows from the disrtibution rule of this IC, i.e. we apply it when the FSP is directed to the zero result of the action (cf. *TAB. 1*).

In a given situation it can be needed that all three arguments would be stressed and in that case they will be arranged in the block.

3.2. Similarly as with MIN COMB^s and BAS COMB^s, in conclusion to the examination of the processes in EXT COMB^s a table with the actualized QU^s is given below. At the +side we find the same +QU that we have seen in *TAB. 2* and *4*. However, with EXT COMB^s, more permutations of them are possible. The most permutations of the +QU^s belong to the EXT COMB (19) where the three NQ^s possess a considerable measure of independence, because they have no function as operator of negation in the sense of having effect on another type of Q in the COMB. (Nevertheless, I put them into the brackets, with respect to the possibility to be used as a semantic block). Because of the limited space in the table, the permutations corresponding with the EXT COMB (19) are arranged in two rows.

Fewer permutations are found for the NQ^s in the EXT COMB (15b) and (18), just for the reason that they have to function in a block as the operator of negation. In EXT COMB^s (10b), (11b) and (14b) I do not consider the possibility of different +QU^s for each of the actualized UQ^s at the −side of the *TAB. 5*, because they are influenced by negation obligatorily as a block.

Again, if to the COMB^s at the −side with identical number belong — totally or partially — the same permutations at the +side, I do not repeat them and therefore no dividing line is made between the sections (e.g. (12a^1), (12a^2), (12a^3), (12b)). (see *TAB. 5* in the appendix).

3.3. The analysis of the larger COMB^s has given deeper insight into the quantitative processes which arise when the Q^s are influenced by negation.

The presence of more than one Q in a COMB provides the possibility of differentiating the scope of negation. Each Q in a COMB can in principle be alone in the scope of negation, while one or two other Q^s stay free. To get two or three Q^s simultaneously negated they have to be of the same type (and in this way to form a semantic block). NQ cannot be negated because the meaning of TOT NEG is inherent in its lexical meaning.

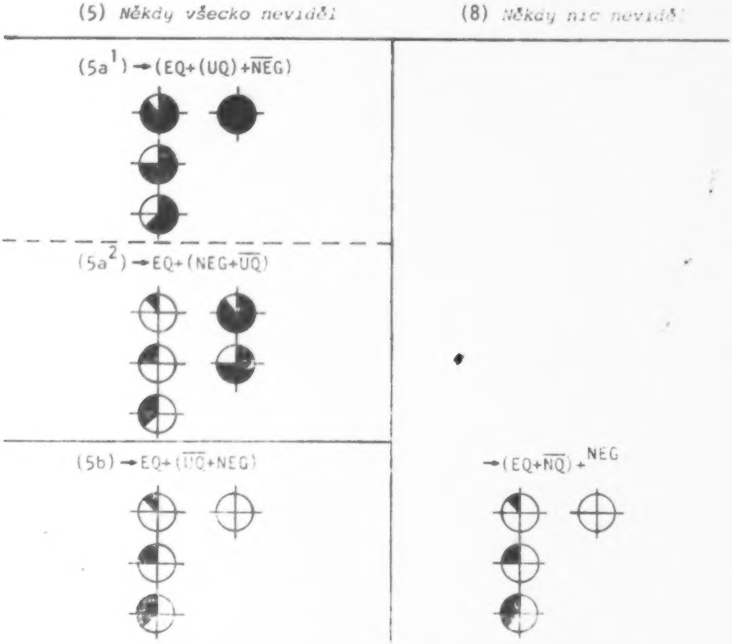
In the larger COMB^s, NEG is not the only operator of negation — the second one is NQ. In COMB^s where NQ/NQ^s are used, the effect of NEG is suspended and it only transmits the lexical meaning of the verb.

When NQ^s affect UQ^s there are special rules determining which Q^s are compatible in order to reach the meaning needed. These rules are based on the difference in SE of individual UQ^s and NQ^s (cf. *TAB. 3*).

The quantitative changes, which follow from the operations, I showed in *TAB. 2, 4* and *5*. The fundamental pattern of changes, stated already in MIN COMB^s ,remains valid in larger COMB^s, but of course there is much more quantitative variation possible. With UQ/UQ^s the change is again variable, from the lowering of their QU to the level of EQ^s to the lowering to the level of NQ^s. This last process also brings about the alteration of +POL of the UQ into −POL.

In COMB^s with EQ^s we state on the one hand — as usual — a slight increase of the QU when the operator is NEG and on the other hand the same QU when the operator is NQ. For the sake of illustration I give below (***Fig.** 3*)

Fig. 3


(5) Někdy všecko neviděl
(8) Někdy nic neviděl
(5a^1) → (EQ+(UQ)+$\overline{NEG}$)
(5a^2) → EQ+(NEG+$\overline{UQ}$)
(5b) → EQ+($\overline{UQ}$+NEG)
→ (EQ+$\overline{NQ}$)+^{NEG}

the scheme of BAS COMB (5), realized with two IC^s, i.e. with ICNC for (5a) and with ICC for (5b), and further BAS COMB (8) which corresponds in meaning with BAS COMB (5b).

The various scopes of negation are directed by the FSP; to some extent the word-order can indicate which one of the present Q^s is negated. However, the word-order does not always work in this sense, because there are syntactic constraints and some special limitations such as those of EQ^{s} requiring the position before the negative component.

In order to reach either the meaning of PART NEG or the meaning of TOT NEG, it is necessary that a specific IC be applied. In a preliminary way, I distinguished two types of IC, ICNC and ICC and I have mentioned them throughout the discussion of all the COMB^{s}. The survey on the distribution of ICNC and ICC is given below in *TAB. 6*. This table displays among other things the fact that the COMB^{s} of the type MIN COMB (2), BAS COMB (7) and EXT COMB (16) have only one possibility of occurence. This is because with COMB^{s} like these SS always is on $\overline{\text{NEG}}$ and stressed $\overline{\text{NEG}}$ is found only when ICNC is applied. Also, *TAB. 6* shows clearly the independence of the COMB^{s} in which only NQ^{s} are actualized with respect to the meaning of TOT NEG. Neither IC nor the position of SS play a role in achieving this meaning; they only play a role in indicating the given FSP. The two IC^{s} distinguished in this examination differ from each other in the following features:

a. In the COMB^{s} with ICNC SS can be placed either on $\overline{\text{NEG}}$ or on the Q ($\overline{\text{UQ}}$ or $\overline{\text{NQ}}$). Therefore, these COMB^{s} are able to express two different FSP^{s}, one of which concentrates on the action itself and the other one on its result. The exception here are the COMB^{s} with EQ^{s} (MIN COMB (2), BAS COMB (7), EXT COMB (16)), because this Q is never stressed provided there is no subordinate clause behind it. This means, the FSP is in COMB^{s} with EQ^{s} regularly concentrated on the negative action.

There is most often a rising at the end. In the COMB^{s} with ICC SS always is on the Q ($\overline{\text{UQ}}$ or $\overline{\text{NQ}}$) and consequently, only one FSP can be expressed, namely that one pointing to the very negative result (the SS is here mostly emphatic). There are, however, different FSP^{s}, which are connected with the scope of negation, and these can be expressed in COMB^{s} with both types of IC, cf. EXT COMB^{s} (13) and (14).
There is no rising at the end.

b. Except for the COMB^{s} in which only NQ^{s} are used, ICNC always is applied in COMB^{s} with the meaning of PART NEG .Therefore, in these COMB^{s} the QU of UQ^{s} never is lowered to the level of NQ^{s}. On the other hand, ICC is characteristic for COMB^{s} with the meaning of TOT NEG, as long as we stay with MIN COMB^{s}, cf.

(1a) *Všecko n̅e̅viděl* ICNC PART NEG
(1b) *V̅šecko neviděl* ICC TOT NEG
(2) *Něco n̅e̅viděl* ICNC PART NEG

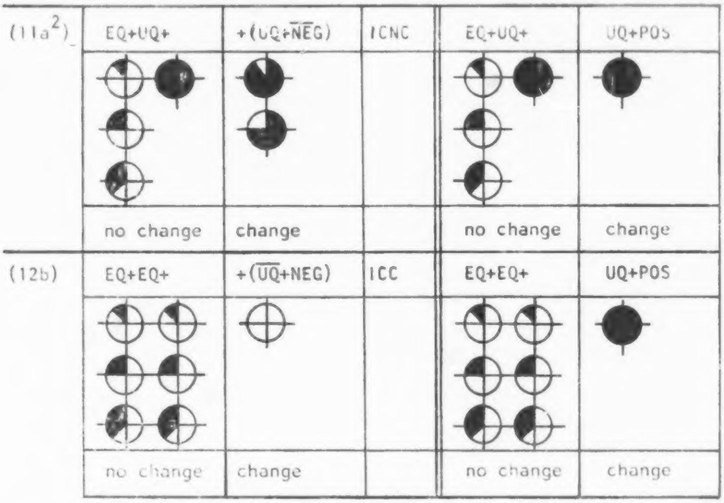
In larger COMB^{s} with different types of Q^{s} ICC also can be found when the meaning of PART NEG is achieved (cf. (5b)); but such a COMB always contains at least one Q on which SS is placed (which means a stressed negative result). In this way they form a semantic variant to COMB^s with ICNC.

c. COMB^s with ICNC occur very often as a non-final part of a complex sentence, while COMB^s with ICC do not.

Still larger COMB^s (EXT COMB^s) containing there Q^s of the same or of different type conform in principle to the rules which are valid for the BAS COMB^s. Yet they have some specific features. For example, with Q^s of the same type there is an increasing tendency to form semantic block which can be used for the purpose of emphasis (this does not apply to EQ^s). Moreover, when two NQ^s are actualized, they both function (in a block) as the operator of negation. In the COMB^s with Q^s of various types a decrease of semantic clarity can be stated; for this reason, in some cases the global understanding of the COMB is not possible.

Because of the larger extent of these COMB^s we find an increase of the component which in the given situation can stay outside the scope of negation and, consequently, remains the same as in a corresponding combination with POS, cf.

Fig. 4



The aim of this study was to analyse the quantitative relations in COMB^s of Q^s, influenced by negation, the place of SS and the word-order. I hope to enlarge the study of these and related phenomena — as are the IC and FSP — in the future.

3.4. In conclusion, I give two more surveys; the first, *TAB. 6*, displays the IC^s applied in the discussed MIN COMB^s, BAS COMB^s and EXT COMB^s.

TAB. 6

COMB	ICNC	meaning	COMB	ICC	meaning
(1a)	UQ+$\overline{\text{NEG}}$/NEG+$\overline{\text{UQ}}$	PN	(1b)	$\overline{\text{UQ}}$+NEG	TN
(2)	EQ+$\overline{\text{NEG}}$	PN		—	
(3)	NQ+$\overline{\text{NEG}}$/NEG+$\overline{\text{NQ}}$	TN		$\overline{\text{NQ}}$+NEG	TN
(4a)	UQ+UQ+$\overline{\text{NEG}}$/NEG+$\overline{\text{UQ}}$+$\overline{\text{UQ}}$	PN	(4b)	$\overline{\text{UQ}}$+$\overline{\text{UQ}}$+NEG	TN
(5a)	EQ+UQ+$\overline{\text{NEG}}$/EQ+NEG+$\overline{\text{UQ}}$	PN	(5b)	EQ+$\overline{\text{UQ}}$+NEG	PN
(6a)	UQ+NQ+$\overline{\text{NEG}}$/UQ+NEG+$\overline{\text{NQ}}$	PN		$\overline{\text{NQ}}$+UQ+NEG	PN
			(6b)	$\overline{\text{UQ}}$+NQ+NEG	TN
(7)	EQ+EQ+$\overline{\text{NEG}}$	PN		—	
(8)	EQ+NQ+$\overline{\text{NEG}}$/EQ+NEG+$\overline{\text{NQ}}$	PN		EQ+$\overline{\text{NQ}}$+NEG	PN
(9)	NQ+NQ+$\overline{\text{NEG}}$/NEG+$\overline{\text{NQ}}$+$\overline{\text{NQ}}$	TN		NQ+$\overline{\text{NQ}}$+NEG	TN
(10a)	UQ+UQ+UQ+$\overline{\text{NEG}}$/NEG+$\overline{\text{UQ}}$+$\overline{\text{UQ}}$+$\overline{\text{UQ}}$	PN	(10b)	$\overline{\text{UQ}}$+$\overline{\text{UQ}}$+$\overline{\text{UQ}}$+NEG	TN
	EQ+UQ+UQ+$\overline{\text{NEG}}$/EQ+NEG+$\overline{\text{UQ}}$+$\overline{\text{UQ}}$	PN	(11b)	EQ+$\overline{\text{UQ}}$+$\overline{\text{UQ}}$+NEG	PN
(12a)	EQ+EQ+UQ+$\overline{\text{NEG}}$/EQ+EQ+NEG+$\overline{\text{UQ}}$	PN	(12b)	EQ+EQ+$\overline{\text{UQ}}$+NEG	PN
(13a)	EQ+UQ+NQ+$\overline{\text{NEG}}$/EQ+UQ+NEG+$\overline{\text{NQ}}$	PN		EQ+UQ+$\overline{\text{NQ}}$+NEG	PN
			(13b)	EQ+$\overline{\text{UQ}}$+NQ+NEG	PN
(14)	UQ+UQ+NQ+$\overline{\text{NEG}}$/UQ+UQ+NEG+$\overline{\text{NQ}}$	PN		UQ+UQ+$\overline{\text{NQ}}$+NEG	PN
			(14b)	$\overline{\text{UQ}}$+$\overline{\text{UQ}}$+NQ+NEG	TN
(15a)	UQ+NQ+NQ+$\overline{\text{NEG}}$/UQ+NEG+$\overline{\text{NQ}}$+$\overline{\text{NQ}}$	PN		UQ+NQ+$\overline{\text{NQ}}$+NEG	PN
			(15b)	$\overline{\text{UQ}}$+NQ+NQ+NEG	TN
(16)	EQ+EQ+EQ+$\overline{\text{NEG}}$	*LA*		—	
(17)	EQ+EQ+NQ+$\overline{\text{NEG}}$/EQ+EQ+NEG+$\overline{\text{NQ}}$	PN		EQ+EQ+$\overline{\text{NQ}}$+NEG	PN
(18)	EQ+NQ+NQ+$\overline{\text{NEG}}$/EQ+NEG+$\overline{\text{NQ}}$+$\overline{\text{NQ}}$	PN		EQ+$\overline{\text{NQ}}$+$\overline{\text{NQ}}$+NEG	PN
(19)	NQ+NQ+NQ+$\overline{\text{NEG}}$/NEG+$\overline{\text{NQ}}$+$\overline{\text{NQ}}$+$\overline{\text{NQ}}$	TN		$\overline{\text{NQ}}$+$\overline{\text{NQ}}$+$\overline{\text{NQ}}$+NEG	TN

On the side of the COMB^s with ICNC I consider two positions for SS; while in COMB^s with ICC only one position for SS is possible. Included are those variants of the word-order which are connected with the change in the position of SS. For the indication of the meaning in the COMB^s I use in this case the abbreviations PN instead of PART NEG and TN instead of TOT NEG.

The last survey (*TAB. 7*) inventories all analyzed COMB^s. In the arrangement I have endeavoured to show the mutual correspondence between MIN COMB^s, BAS COMB^s and EXT COMB^s. However, in some cases the cross-reference is more complex and therefore it is not possible to reach the one-to-one visual representation. For technical reasons only one variant of word-order is included for each COMB.

TAB. 7

MIN COMBs		BAS COMBs		EXT COMBs	
(1)	(1a) UQ+$\overline{\overline{\text{NEG}}}$	(4)	(4a) UQ+UQ+$\overline{\overline{\text{NEG}}}$	(10)	(10a) UQ+UQ+UQ+$\overline{\overline{\text{NEG}}}$
	(1b) $\overline{\text{UQ}}$+NEG		(4b) $\overline{\text{UQ}}$+$\overline{\text{UQ}}$+NEG		(10b) $\overline{\text{UQ}}$+$\overline{\text{UQ}}$+$\overline{\text{UQ}}$+NEG
		(5)	(5a) EQ+UQ+$\overline{\overline{\text{NEG}}}$	(11)	(11a) EQ+UQ+UQ+$\overline{\overline{\text{NEG}}}$
			(5b) EQ+$\overline{\text{UQ}}$+NEG		(11b) EQ+$\overline{\text{UQ}}$+$\overline{\text{UQ}}$+NEG
				(12)	(12a) EQ+EQ+UQ+$\overline{\overline{\text{NEG}}}$
					(12b) EQ+EQ+$\overline{\text{UQ}}$+NEG
		(6)	(6a) UQ+NQ+$\overline{\overline{\text{NEG}}}$	(13)	(13a) EQ+UQ+NQ+$\overline{\overline{\text{NEG}}}$
			(6b)$\overline{\text{UQ}}$+NQ+NEG		(13b) EQ+$\overline{\text{UQ}}$+NQ+NEG
				(14)	(14a) UQ+UQ+NQ+$\overline{\overline{\text{NEG}}}$
					(14b) $\overline{\text{UQ}}$+$\overline{\text{UQ}}$+NQ+NEG
				(15)	(15a) UQ+NQ+NQ+$\overline{\overline{\text{NEG}}}$
					(15b) $\overline{\text{UQ}}$+NQ+NQ+NEG
(2)	EQ+$\overline{\overline{\text{NEG}}}$	(7)	EQ+EQ+$\overline{\overline{\text{NEG}}}$	(16)	EQ+EQ+EQ+$\overline{\overline{\text{NEG}}}$
		(8)	EQ+NQ+$\overline{\overline{\text{NEG}}}$	(17)	EQ+EQ+NQ+$\overline{\overline{\text{NEG}}}$
				(18)	EQ+NQ+NQ+$\overline{\overline{\text{NEG}}}$
(3)	NQ+$\overline{\overline{\text{NEG}}}$	(9)	NQ+NQ+$\overline{\overline{\text{NEG}}}$	(19)	NQ+NQ+NQ+$\overline{\overline{\text{NEG}}}$

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REVIEW

CONTRASTIVE LEXICAL SEMANTICS: THEORY AND APPLICATIONS*

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The topic of lexical semantics and semantic fields in a corsslinguistic perspective has recently been gaining a new illumination especially from those linguists who base their research on prototype semantics (cf. e.g. Brugman 1983, and Coleman and Kay 1981). The book under review provides empirical evidence that this is the correct direction to develop not only empirical studies but also, by implication, a theory of language.

The basically practical aim of the book — to help German students, teachers and translators gain a better knowledge of English — required a pragmatic approach: "the focus of investigation is a contrastive analysis of lexemes which have as yet been given unsatisfactory treatment in both monolingual and bilingual dictionaries, and which have proved to be a conspicuous cause of error in translation" (p. 13) .The author's extensive experience as a teacher of translation let her produce a study of a fragment of two languages rich in implications not only for linguistics, including historical, but also for literary stylistics, lexicography, and foreign language teaching.

The object of the study is the descriptive verb (DV) examined extensively (1100 lexemes, 617 English and 483 German). The analysis is carried out in a double perspective: intralinguistic (paradigmatic) and interlinguistic (contrastive German/English). The data were obtained from dictionaries, modern fiction, and informants. The study is limited to the *semantic analysis* of individual German and English lexemes and their comparison. The presentation of the results is delibarately informal due to "the unsuitability od formalization" (22, fn) for the purpose in question.

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* Review of: Mary Snell-Hornby. *Verb descriptivity in German and English: A contrastive study in semantic fields.* Heidelberg: Carl Winter Universitätsverlag. 1983.

The nature of *verb-descriptivity* is discussed in Chapter 2. The verb is considered to be syntactically and semantically the most complex element in many languages. This opinion is quite widespread and has recently been confirmed in a number of papers dealing with verb transitivity treated as a continuum with a number of explicit parameters proposed by Hopper and Thompson (1980). There too the verb is assumed to express, in the words of Tesnière, "un petit drame". The class of verbs S-H is concentrating on is the *dynamic verb*, i.e. the verb denoting an event which is either modified by an adjective or adverb, or it contains a semantic element corresponding to such an adjective or adverb in its own meaning. The author calls the semantic core of the verb the *act-nucleus* (ANu), and the other element is the modifying adverbial or *modificant* (Mod) which can be further analysed into physical properties and value-judgements.

In order to bring the object of her enquiry into focus, the author makes a number of distinctions. In *direct* descriptivity, the Mod refers to Act, and in *indirect* descriptivity, it describes Participants and Circumstances. *Dynamic* and *stative* descriptivity are distinguished in terms of *internal* (size, shape, substance) vs. *external* (temporary, changeable, evaluating) properties, e.g. *tall, liquid* vs. *brave, lovely*. It seems that it might be terminologically more appropriate to talk in terms of objective vs. subjective properties, just as the example given suggest. This is a minor point, however. Owing to the objective nature of stative descriptivity it can be adequately handled by *formalized componential* analysis, while *dynamic descriptivity* requires the method of definition. Although it may sometimes be difficult to differentiate between verbs in terms of the above distinctions, a problem of which S-H is well aware, in analyses that follow they are shown to be justified and deserve more attention in future research. What needs to be discovered are exhaustive sets of parameters in terms of which to carry out the classification.

In S. 2.4 S-H introduces the concepts of *degree of descriptivity* and *range of application*. The former depends upon the comparison between what S-H calls the semantic weight taken by the Mod (the degree of descriptivity is then higher, e.g. *bustle, bumeln*), and the semantic weight taken by the ANU (where the degree of descriptivity is lower, e.g. *shout, wälzen*). Similarly as the other distinctions, this one too is approximate rather than categorical, taking into consideration possible intermediate cases as well as their subjective evaluation by the linguist.

A verb which leaves participants and circumstances open, e.g. *get*, has a broad *range of application* (RAp). Such verbs are said to have their range of application in "varying situations" (p. 34). The notions of RAp and varying situations imply that the verbs in question cannot in fact be described at all unless all the relevant *features of context* are taken into consideration. The contextual parameters can not only cause a shift of meaning of such core verbs as *go, speak, get*, but also of the senses of descriptive verbs. By context we understand not only the features of "objective" reality but also the entire socio-psychological conditioning in which the participants of the verbal encounter interact. Such an approach could perhaps decrease or even eliminate some of S-H's methodological problems, especially as she herself states that some practical problems, e.g. FL learners' errors, could only be counteracted by "a precise semantic analysis" (p. 35). It seems to us that more could be achieved if the above suggestion were considered. A framework for such a model is proposed in Lewandowska-Tomaszczyk (1985). This, however, would stand in certain contradiction with the author's explicit rejection of any strict formalization as well as with her practice throughout the book.

In S. 2.5 S-H introduces a classification of DV's in terms of the semantic role played by their grammatical subject. Particularly pertinent to the explanation of verb descriptivity is the author's distinction between *agent*, *vehicle* and *patient*. *Agent*, in accordance with the linguistic literature, refers to the animate, active instigator of the action. It stands in opposition to another case, *vehicle*, which S-H defines as the active "conveyer" of the action. *Patient*, on the other hand, is the passive "sufferer" of an action performed on him/her/it form outside. The above distinction accounts for the unacceptability of **The sun is being shone* and the role differentiation between *The torch shone brightly* (vehicle) and *A torch was shone in my face* (patient).

The speaker uttering a sequence sets a *norm* according to which s/he evaluates the action being described. S-H proposes that the dynamic adjectives present with the descriptive verbs, implicitly or explicitly, reflect the subjective assessment of the speaker in terms of biological, e.g. *stutter, hinken*, or social, e.g. *stagger*, average.

Another concept introduced by S-H in her analysis is the notion of *focus*, which denotes the most central element in the content of the verb. With reference to focus, S-H aptly observes: "In such cases it is important to stress that the modificant still remains a complex of interdependent units; it is not, as is postulated in formalized componential analysis, a bundle of isolated components, all with equal values. The elements of verb-descriptivity are not objectively isolatable, but rather merge into each other ,as in a spectrum of colour. And in this spectrum some points are more focal than others" (p. 39). The argument for postulating a focal element in each DV is the unacceptability of sentences in which the focal element is contradicted: **She yelled gently*. Furthermore, the focus seems to be a criterial property for the whole category of verbs situated in the same semantic field.

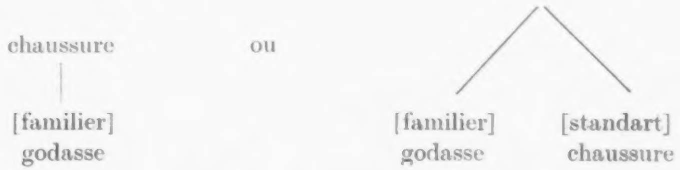
The focal element proposed by S-H appears to correspond to the markers of *salience* introduced in Lewandowska-Tomaszczyk (1984) to denote a *vehicle of metaphor*. S-H notes, in this connection, that in metaphoric expressions ANu tends to be variable and the focus of Mod tends to be constant (p. 44).

It should be pointed out, however, that the interpretation of metaphoric expressions may depend on the directionality of analysis. A well-known example is that provided by Levin (1981). *The brook smiled* can be interpreted according to two directions of analysis: either the concept of *brook* is modified (personification) or that of *smiling* (amalgamation in the form of displacement). In the former case the brook is seen as a human being, in the latter smiling is modified to mean an action or state that can be characteristic of brooks (e.g. sparkling, glistening). S-H seems to be placing the core of metaphorical expressions always in the verb but, if the whole utterance is analysed, that may not always be the case.

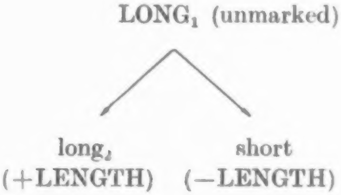
Chapter 3 is an interesting discussion of the inadequacies of current semantic theories to deal with verb descriptivity. In her approach S-H follows Wittgenstein in identifying the meaning of a word with its use (p. 47). This allows her to be much more flexible in the description than any of the models of the Fregean orientation would permit.

The failure of classical semantic analyses to account for the connotational meaning of a word, emphasised by S-H, has been taken up by many linguists as a starting point for their modified analyses of meaning stemming from different linguistic traditions. S-H admits her affiliation with the European structuralist tradition involved in the study of semantic fields (p. 66). Whether the study of connotation belongs to linguistic semantic is a problem that is answered differently by different authors. For instance, Catherine Kerbrat-Oreccioni in her impressive study (1977) suggests: "Nous appellerons 'sémantiques' les connotations qui fournissent des informations sur le référent du message. *Mais tous les signifiès de connotation peuvent etre considèrès comme 'sémantiques'*, au sens *large*". (p. 67 fn) (emphasis added).

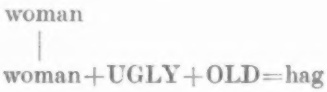
Borderline cases where no adequate semantic procedure is available to distinguish between denotation and connotation have received considerable attention in numerous publications. Much discussion has also been devoted to the way in which lexical items with some inbuilt evaluative markers should be formally represented in a linguistic theory. Examples of such items are *woman-hag* (Leech 1974: 14), *chaussure-godasse* Kerbrat-Orecchioni 1977: 100), *koń-szkapa* in Polish. According to Kerbrat-Orecchioni, "'chaussure' et 'godasse' ont la meme extension, si elles n'ont pas la meme compréhension. Il serait donc malencontreaux d'assingner aux deux relations le même type de representation graphique:



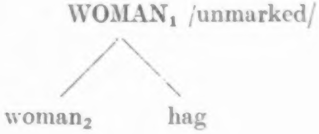
Kastovsky (1982) discusses a related issue although connected with unmarked/marked pairs of a different type. He presents a number of alternative analyses of such pairs as *long-short*. On one reading they function as antonyms; contrasted however on the basis of a common dimension LENGTH, *long*$_2$ is a co-hyponym of *short*, while LONG$_1$ is a supernode, which is expressed by an item homophonous with *long*$_2$, but with no value marker (+LENGTH) (Ljung 1974, quoted by Kastovsky, op. cit. p. 39):



S–H writes: "Looking however at the definitions of *hag* in ALD and COD we find 'ugly old woman'. This means that the emotive elements *ugly* and *old* with the ensuing negative speaker-evaluation are included within the definition of *hag*, and without them *hag* would be referentially identical to *woman*. Hence they are not connotations, but part of the *denotative meaning*". (p. 48) (emphasis added). According to S-H then, the analysis of the respective pair could look as follows:



Modelling the analysis after Ljung, we could get:

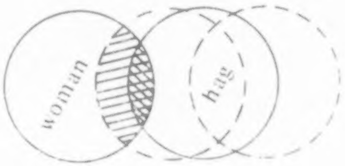


The unmarked case could be exemplified by the question *What kind of woman is she?*, parallel to the unmarked *How long is it?* However, if we try to find the common denominator for *woman* and *hag*, it turns out that it is not necessarily age and beauty (cf. *She is a (real) woman* vs. *She is a (real) hag*). What seems to be involved here is also or, perhaps, first of all, *frightful* looks or the person's *nature* (good vs. evil). For some other native speakers, *hag* may be primarily associated with a woman who does evil *magic*, i.e. an evil witch. Dictionaries do record such usages:

hag — 1. An ugly, frightful old woman; a termagant; crone.
2. A witch, sorceress.
3. *Obsolete*. A female demon. (HERITAGE)

hag — witch; ugly old woman, esp. one who does, or is thought to do, evil. (ALD)

The solution modelled on Ljung might imply that we are dealing with an entirely parallel situation, while in reality it may only be partial. What really happens in interaction could be more adequately represented in the following way (dynamic overlapping):



She is an ugly old woman, a real hag.
She is a fightful old woman, a real hag.
She is not a woman, she is a hag.

Each of the above sentences could occur in interaction without involving contradiction.

By postulating a reductionistic analysis of *hag*, S-H paradoxically gets caught in the same paradigm that she has been fighting, i.e. that the meaning of the whole is a sum of the meanings of the components.

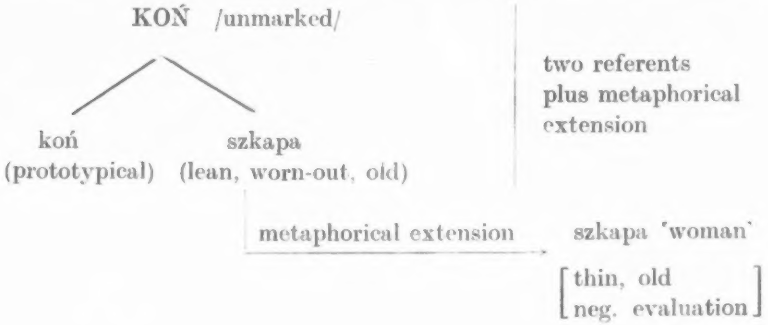
Another thing that seems to be quite evident is that the analysis of meaning must be made sensitive to the world-knowledge, beliefs and intentions of the speaker. This is a subject of detailed analyses of linguists who try to give them the form of formal claims and hypotheses (cf. Lewandowska-Tomaszczyk, in (1985)).

Our solution to problems of the type discussed above would be one in which two types of relation are posited to hold between the marked and unmarked members of a pair. This is only possible in a language model which is capable of representing the context ,as defined above, in a systematic way. In the first of the two diagrams below,

1. koń (unmarked) | one referent
|
szkapa (affective: familiar) |
positive evaluation

the two forms, *koń* (horse) and *szkapa* (jade) are coreferential. The difference is in that the former is unmarked and the latter is affective (familiar) with positive evaluation. Such an interpretation presupposes shared world-knowledge between the participants in the interaction. In the second diagram,

2.



koń and *szkapa* are not coreferential, each being dominated by unmarked supernode KOŃ. *koń* represents a prototypical (average) horse, and *szkapa* represents a prototypical jade, i.e. a lean, worn-out (old) one. While the jade in the first diagram may in reality be a fine horse, with the two words (*koń* and *szkapa*) being potentially interchangeable, the one in the second diagram is definitely negatively evaluated with respect to external features, which permits metaphorical extension to thin and worn-out woman. For this analysis to be complete, one would have to consider the interactional component of meaning (cf. Lewandowska-Tomaszczyk, in press).

S-H correctly points out that the problem of borderlines between denotation and connotation, although hazy, depends to a great extent "on the accuracy of the definition" (p. 49). We would modify that statement to read: the accuracy of a number of context-dependent definitions. This, it seems, is exactly what can be gained by collecting so much material from authentic written and spoken texts as well as from interviewing the native speakers of the language and, possibly, by administering some general or more specific tests. In this way it should be possible to make explicit the systematic differences between various speakers' intuitions and between the context-dependent intuitions of one and the same speaker.

In order to check some of the results obtained by S-H we had our students analyse selected classes of verbs (Polish and English, contrastively, and English only, diachronically) for their term papers. While the results obtained will be presented elsewhere in detail, it is worth mentioning that an analysis of the English verbs in S-H's group for *talk fast and indistinctly* conducted by A. Brzezińska by means of Osgood et al's semantic differential method made it possible to calculate the semantic distances among the verbs (using ZX

Spectrum). The configuration obtained was similar to that proposed by S-H (p. 172), even though it was more specific in details.

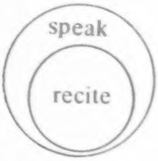
In her discussion of the lack of contribution of TG to the problem under discussion and, more specifically, the problem of elementary semantic properties of the verbs *lurk* and *loiter* (Ross 1970 and Fillmore 1971), S-H criticizes the statement of acceptability with respect to sentence (8): *She said I had been lurking outside her window*: "(8) also seems a questionable sentence, because with a sinister or uncanny agent the identity is unlikely to be familiar; *lurk* does not collocate naturally with a known third person, and the *I* in indirect speech implies that the speaker (*she*) is aware of the agent's identity" (p. 52). In our opinion it is not so much the speaker's awareness of the agent's identity that should dissuade her from using the verb but rather either 1) the awareness of the person's presence at the moment of speaking, or otherwise 2) a negative evaluation of the person. If neither of the circumstances occurred, the sentence seems perfectly natural.

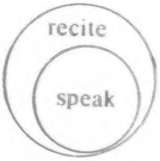
Discussing verb-descriptivity and semantic roles (p. 60) S-H refers to well-known proposals concerning the number and types of semantic roles (cases). She concludes that there is a "discrepancy between this complex material and the rather simplistic aim of defining a basic set of semantic roles universally valid for all languages". (p. 60). "In fact the roles can vary with the idiosyncrasies of individual languages" (p. 60, fn). This statement seems to reflect what S-H does not explicitly say but what has been discussed in Lewandowska-Tomaszczyk (1985). Namely, the fact that semantic structure of a language is one of its specific rather than universal levels correlates with the grammatical characteristics of that language which, together with the semantic roles, act as filters for categorizing the extralinguistic reality. For that reason some of the roles postulated in the semantic structure may be universal, while some others can vary in individual languages.

Conceding partial usefulness of componential analysis, S-H declares the technique unsuitable for the "hazier area of subjective evaluation", where description and definition are more appropriate (p. 64). It seems, however, that explicitness and formalization cannot be restricted to classical componential analysis; wherever and whenever formalization is possible, it should be attempted. Even in cases of vagueness of concepts and the subjective evaluation associated with the concepts, formal explicit devices should be proposed and tested.

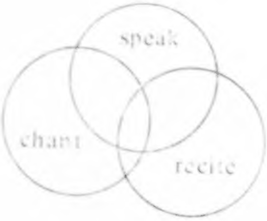
With regard to the status of componential features and their analyzability by computer, we believe that whereas e.g. ±ANIMATE represents a set of UNIVERSAL features, it does not seem to be the case that e.g. SCHNELL as a relative adjective is language specific. The *relativity* of *schnell* and other similar relational terms is also a *universal* language property. S-H also proposes that since the relational features get determined only in the context, such and similar factors are not "communicable to a computer" (p. 65). This is clearly not the case with computer programmes which *can* process contextual information (consider e.g. the SHRDLU program, developed as early as 1972 by Winograd). What computers *cannot* deal effectively with are informal descriptions and definitions.

Emphasizing her links with the founders of the "field-theory" S-H criticizes, nevertheless, the *bi-valent* basis of oppositions proposed by them on the grounds that all the intermediate values (fuzzy edges, overlappings, etc.) clearly show the multi-dimensional basis of oppositions (p. 67). She argues against Coseriu's idea (1967) of an *archilexeme*, pointing rightly to the fact that not all of the content of e.g. *nuschen*, *haspeln*, or *stottern* is contained in *sprechen*, which is then the *nucleus* of the field reflecting a *norm* with a variety of possible modifications. It seems to us, however, that the reverse is also true: not all of the content of *sprechen* is contained in any of the other three verbs. *Sprechen*, like *speak* in English and *mówić* in Polish, if not modified, seems to express a certain *average* expected and used by all members of a language community. For that reason we have such examples as: On nie *recytował* — on *mówił* (He was not reciting, he was speaking), or Wolę *porozmawiać* niż *szczebiotać* bez sensu (I'd rather talk than chatter senselessly). If all of the meaning of *mówić* were contained in *recytować*, such sentences would yield a contradiction (similar cases occur on the nominal level). In other words, neither of the two simple configurations below appears to adequately convey the relationship involved:





What is required is a more complex diagram, with possible spaces for other related verbs:



If compared with another natural language, configurations of type 3 would present a still higher degree of complexity. It thus appears that no simple and neat classification of lexical items can adequately represent the complex relations involved.

It is hard not to agree with S-H when she proposes that the classical field-theory be replaced by "a more irregular spectrum rather similar to Berlin and Kay's representation of colour terms with focal areas, blurred edges and overlappings. Such a spectrum differs from the image of varied 'bundles' put forward by formalized componential analysis in that the lexemes are not always clearly differentiated through the presence or absence of itemized features, but often through the *intensity*, the *stress* and the *evaluation* of their components" (p. 68, italics added). It seems to us, however, that attempts at formalization of the notions of intensity, stress, evaluation, etc., are fully justified and well-motivated and should not be dismissed because of *a priori* biases (cf. Lewandowska-Tomaszczyk, 1985). This, however, requires a much more comprehensive look at language phenomena in the sense of integration of micro- and macro-linguistic levels.

Chapter 4 constitutes the empirical part of the study, and it takes up almost half of the book's length. There the author presents the characteristics of DV's in German and English, discusses the methodological criteria and delineates the basis for the classification of the verbs into major fields, areas and subfields. The detailed definitions used are abstracted from citations.

The classification of the verbs is organized into conceptual domains in a thesaurus-like fashion, with MAN in the centre, ANIMAL on the one hand, and NATURE on the other. In accordance with this scheme four main groups of verbs are posited expressing I — Human Behaviour, II — Movement and Position, III — Sounds, IV — Light and Facial Expression. The classes of verbs are represented as hierarchical structures, which are common to both languages. The structures of the subfields and of the individual lexemes exhibit inter-language differences and for that reason separate diagrams are necessary at that level for German and English. Each pair of diagrams is accompanied by a detailed discussion of the similarities, differences and overlappings between the two languages. The presentation of intra- and inter-language relationships in the form of such diagrams is an oversimplification (see the discussion above) but we understand it was necessary for pragmatic reasons.

Chapters 5 and 6 show the use and function of DV's in modern literature and in translation.

The salient features of descriptive verbs make them a powerful stylistic device, most suited to express dynamic, dramatic action and to manipulate the reader's attitude. This the author finds to be the case in an analysis of 16 works of fiction divided for the purpose into units of 1600 words. Interestingly, the device is made more extensive and varied use of in English than in German.

Basing on the writers' practice of using varying combinations of semantic components, S-H introduces a distinction between *transparent* and *opaque* styles. In the former, the given word is reinforced semantically by its context and, sometimes, also by a simile (English only). In the opaque style, on the other hand, the meaning of an item cannot be deduced from its context. The examples given on pp. 203-206, "selected as particularly clear illustration of each type of style", show that the two are not in every case poles apart. If *glance* in *He shot an instance's glance* is linguistically reinforced by *shot* and *an instance's*, then *stared* in *The camels stared and said nothing* is likewise reinforced by the extralinguistic knowledge of typical camel behaviour. Needless to say, that part of the discussion carries an obvious implication for those concerned with the selection of illustrative (linguistic) material for dictionaries.

The discussion of the DV in German-to-English translation starts with some general remarks on interlingual semantic equivalence.

Basing on the analysis carried out in Chapter 4, S-H proposes a four-degree scale of *total equivalence*, *working equivalence*, *partial coverage* and *nil-coverage*, which are to be reagarded as "guidelines" and not "rigid pigeon-holes" (p. 216). The relative concept of *extent of coverage*, as distinct from the absolute concept of equivalence, is to take care of those instances where an L1 item covers e.g. the ANu and some elements of the Mod of the L2 word, while the remaining semantic content may be expressed by paraphrase, according to the requirements of the context (p. 215). While *nil -coverage* seems to be no more than another word for what the Russians call "equivalentless lexis" (e.g. Vlakhov and Florin 1980), the concepts of working equivalence and partial coverage constitute a significant terminological imporvement over the imprecise notion of "partial equivalence" (Zgusta 1971:312ff).

The translation tests S-H conducted with her students confirmed that FL learners instinctively expect one-to-one equivalence in translation, and showed that the number of mistakes made did not depend on whether the use of a dictionary was permitted; what it did depend on was the type of verbs and the extent of their coverage or equivalence. It turns out that translation is easier when there is working equivalence between the verbs involved and no change in their range of application, while partial coverage and change from broad to narrow RAp results in more errors.

In general, the monolingual English dictionaries provided reliable help, while bilingual dictionaries were reasonably adequate in cases of working equivalence between two verbs with narrow RAp. In cases of partial coverage involving, in addition, a change from broad to narrow RAp (dynamic descriptivity), the bilingual dictionary cannot, by definition, offer reliable guidance. This is because "it is based on a system where sufficient clarification of the semantic components is hardly possible" (p. 230). An analysis of the lexicographic treatment of just one field (talk fast and indistinctly) in Polish and Polish-English dictionaries, carried out for the purpose of this review, fully confirmed S-H's findings and conclusions (as listed on pp. 252 - 3).

It should be obvious that the findings presented in Chapters 5 and 6 provide justification for the distinctions introduced in Ch. 2.

In view of the fact that the study was motivated by the author's dissatisfaction with the treatment of DV's in dictionaries, it is quite appropriate that she should have concluded by stressing the need for bilingual dictionaries "based not on the illusion of equivalence among lexemes but on the awareness that partial coverage and non-equivalence are a reality in interlingual comparison. This will require closer cooperation between the lexicographer and the semanticist and it will probably result in specialized dictionaries based on semantic types" (p. 247). She further adds "...for DV's and other basically similar semantic structures the type of dictionary to be developed would be a contrastive dictionary of synonyms arranged in fields where the lexemes are considered multidimensionally and above all according to their usage in context". (p. 256)

This would be an entirely new type of bilingual dictionary, and implementation of such a proposal would certainly fulfil many a theoretician's (and translator's) dreams. In the context of the current emphasis on users' dictionaries, as opposed to lexicographers' dictionaries (cf. Hartmann 1983), one wonders how such an idea would go down with dictionary publishers and users (cf. Tomaszczyk, 1986).

The amount of research that went into the study is truly impressive. The author admirably succeeded not only in making explicit what many people had long felt to be some of the thorny problem areas of interlingual semantic comparison, as evident first of all in translation and in bilingual lexicography, but also in showing a way to overcome them.

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BIBLIOGRAPHY

AN ANNOTATED BIBLIOGRAPHY OF U.S. PH.D. DISSERTATIONS IN CONTRASTIVE LINGUISTICS: 1970–1983

LARRY SELINKER AND AHMED FAKHRI

This bibliography is an update of " An Annotated Bibliography of U.S. Ph.d. Dissertations in Contrastive Linguistics" by Larry Selinker and P.J.N. Selinker which was published in 1972 by the Institute of Lingustics, University of Zagreb and the Center for Applied Linguistics, Washington, D. C. (The Yugoslav Serbo-Croation-English Contrastive Project, Volume A. 6, 1 - 40, 1972). The earlier bibliography covered the years 1948–1970. This bibliography, which is slightly overlapping, covers the years 1970–1983.

Need for the bibliography

The need for a bibliography of this type was established in the earlier 1972 publication in terms of conferences on the topic, large scale research projects in contrastive linguistics, textbooks in the field, and an "upsurge" in Ph.d. dissertations on the topic. (See the 1972 publicatoin for references). We see a renewal of interest in the topic as evidenced by recent publications in the field (See, e.g., Carl James, *Contrastive Analysis*, Longman, 1980 and Susan Gass and Larry Selinker, *Language Transfer in Language Learning*, Newbury House, 1983).

The bibliography is seen as a first step toward making the information contained in contrastive dissertations more accessible. The annotations are presented to give the reader a more substantial basis for judgement than an elliptical title.

Scope and coverage

For the purposes of this bibliography, "contrastive linguistics" is defined as a type of linguistic description which consists of the comparison and/or contrast of selected linguistic structures across two or more languages, dialects, styles, or idolects, regardless of the original purpose of the study. One consequence of this definition is that contrastive linguistics is distinguished from contrastive analysis which, as traditionally understood, is undertaken with a view toward practical goals. Thus there appear herein many dissertations that have no practical purposes whatsoever. On the other hand, each contrastive analysis dissertation done in the U.S. should be included.

A further consequence of this definition of contrastive linguistics is that dialect studies and studies on style take on a new importance in the field. Researchers doing phonological and syntactic dialect or style studies, as they attempt to look across linguistic systems, often face similar theoretical problems as those who compare and contrast selected linguistic structures across languages. It is thus quite natural to include dialect studies under the contrastive rubric where specific statements of comparison or contrast are made. In addition, their inclusion may help shed light on these theoretical problems which remain essentially unsolved. (For a discussion of these problems, see Larry Selinker, "A Brief Reappraisal of Contrastive Linguistics", Proceedings of the Pacific Conference on Contrastive Linguistics and Language Universals, 1971).

Other types of studies which converge on contrastive linguistics have been included with certain limitations. Some bilingual studies are presented herein if they contain a contrastive part within the dissertation. Comparative historical studies are included only to the extent that a modern language or dialect is specifically compared with an historical one.

Excluded specifically are dissertations which make use of contrastive information for psycholinguistic studies of language transfer and interference, but which do not in themselves contain detailed ocntrastive linguistic studies. Many people have felt that contrastive linguistic statements provide the best source of hypotheses for psycholinguistic experimentation related to the second-language learning process of language transfer, but it is beyond the scope of this bibliography to deal with these matters.

It is hoped that the above information will make the reader aware of the criteria for selection of dissertations in this bibliography. We have searched through all issues of Dissertations Abstracts (*D.A.*) up through volume no. (45.) – our cut-off date.

Arrangement

a. General. The major part of this bibliography is a chronological listing of dissertations; the subarrangement under each year being alphabetical by author. It is felt that a chronological arrangement enables the reader to gain a perspective of changes in the field and also to sort out more current linguistic theory. Following the main bibliography are two indexes which refer the reader back to the full citations and annotations: (1) a strictly alphabetical author index, and (2) a breakdown according to languages, language families, and dialects.

b. Citations. The information for the citations is taken from *D.A.* or from the other bibliographies mentioned and follows a uniform format: author's name; title of dissertation; university where accepted; year accepted; and number of pages (if known). For the majority of disertations there also appears the *D. A.* volume and issue number (e.g., 12.4); year of volume; inclusive pagination for the abstract; and, finally, the order number in parentheses.

c. Annotations. The short summaries which follow most of the citations are not the complete author's abstracts in *D.A.*, but rather are descriptive summaries which we made after reading the longer abstracts. They are in no way intended to be critical or evaluative. Since our intention has been to concentrate on contrastive linguistic studies, the annotations are summaries of the contrastive aspects rather than the dissertation as a whole. The reader should be aware that he may get a distorted view of the dissertation because of this emphasis.

Finally, we would like to thank the following participants of the Seminar in "Contrastive Analysis" (Spring, 1983, University of Michigan) for preparing first drafts of some of the entries: Reiko Hasegawa, Julie Slim, and David Strong. Additionally Kathy White helped us with the preliminary typing and proofing; for this we are most grateful.

1970

1. BACHMANN, JAMES KEVIN. "A Comparison of Nonstandard Grammatical Usage in Some Negro and White Working-Class Families in Alexandria, Virginia." Georgetown, 1970. 120 pp.

D. A. 31.5 (1970), p. 2364-A. (70—21, 276)

Investigates differences in proportional usage of selected nonstandard grammatical features in Negro and White speech. Several tasks were presented to the informants and results, concerning the amount of nonstandard forms in speech, varied according to the tasks. Significant differences were found when Negro children were compared to White children as well as to Negro adults. The following hypothesis is supported by this study: Negro speech shows a higher usage of certain nonstandard grammatical features.

2. BAUCOM, KENNETH LATTA. "Written and Spoken Southern Sotho: Two Forms of Language." The Hartford Seminary Foundation, 1970, 312 pp.

D. A. 31.11 (1971), p. 6031-A (71—11, 445)

This thesis investigates the relationship between the written and spoken forms of Southern Sotho, which has "a limited but established" written tradition, using stratificational grammar. Comparison is made between early and modern written Sotho and between modern written and modern spoken Sotho. A result of this study is that the stratificational model may not be applicable to written alpahabetic languages. A theoretical discussion of linguistic distinctions between written and spoken language is provided.

3. Calvano, William Joseph. "Synchronic Relationships: Five Romance Dialects" Cornell, 1970. 177 pp.
D. A. 30.12 (1970), p. 5429-A. (70–5761)
The approach which considers a single form as underlying all of the dialects compared and which predicts variations by different rules or ruleordering is rejected on the grounds that it violates the concept of "grammar" as a formal description of the native speaker-hearer's competence. The special shapes of cognate items determined by predictability factors as well as rules for converting these shapes into another dialect are considered outside the grammar of all dialects concerned. A phonological sketch of five Romance dialects spoken in Italy (Catanese, Palermitano, Caposelese, Roccagorghese, and Galtellese) is presented; these dialects are compared and categorized on the basis of degree of predictability.

4. Fei, Peter Kuan-chen. "English and Chinese Consonants: a Contrastive Analysis." Michigan, 1970. 220 pp.
D. A. 31.5 (1970), p. 23-A. (70–21, 650)
A synchronic contrastive analysis of American English and Peking Mandarin Chinese consonantal phonemes, following procedures set up by Moulton. A contrastive analysis of the phonological structures of the two languages is presented. Actual errors made by Chinese informants are compared with predicted errors and, in most cases, it is possible to predict areas of facilitation and interference.

5. Ferguson, Thaddeus Julius. "A History of the Romance Vowel Systems through Paradigmatic Reconstruction." Columbia, 1970. 282 pp.
D. A. 32.1 (1971), p. 411-A. (71–17, 487)
A comparison of the Romance Languages' vowel systems is undertaken in order to abstract the vowel structure of Latin and to trace its evolution into Modern Romance. The Modern Romance vowel systems are compared by setting up "correspondences of levels of opening." An early Proto-Romance system of stressed vowels is reconstructed as comprising five levels of opening: a level of maximum aperture represented by the central vowel */a/ and four levels containing a pair of vowel phonemes each, (*/ị–ụ/, */i–u/, */ẹ–ọ/, and */e–o/). The unstressed vowel system is reconstructed as containing the following levels of opening: */ị–ụ/, */$i^{\vee}$–$u^{\vee}$/, */e–o/, and */a/.

6. Fresco, Edward Max. "Topics in Yourba Dialect Phonology." UCLA, 1970. 231 pp.
D. A. 31.12 (1971), p. 6579-A. (71–13, 996)
Each dialect is first analysed independently through "dialect-internal considerations only" in terms of vowel harmony, subject pronouns, assimilatory nasalization of vowels, consonant initial nouns and various vowel sequences in nouns. A model of generative phonology is proposed which has as its base forms feature sets in accordance with markedness notions. Cross-dialect comparisons are then undertaken.

Vowel harmony is found to be a condition on morphemes in most dialects, but in three it is a phonological process. Most dialects have a "subject marker" which is deleted after phonological processes for subject pronouns.

7. GRADMAN, HARRY LEE. "The Contrastive Analysis Hypothesis: What It Is, and What It Isn't." Indiana University, 1970, 160 pp.
D. A. 31.12 (1971), pp. 6579-A and 6580-A (71–14, 476)
This thesis investigates the assumptions underlying the contrastive analysis hypothesis from both a psychological and linguistic perspective. Transfer theory, behaviorism, structural linguistics and some generative theory were considered as the basis for contrastive analysis. In general, supportive evidence for these assumptions was *not* found, though some support was suggested at the phonological level.

8. GUTMAN, DANIEL. "The Morphophonemics of Biblical Hebrew (and a Brief Comparison with Israeli Hebrew)." The University of Texas at Austin, 1970, 174 pp.
D. A. 31.11 (1971). p. 6033-A. (71–11, 548)
This thesis studies the generation of nouns and verbs in Massoretic Hebrew (MH) in terms of roots and patterns arranged according to canonic forms. A comparison with Israeli Hebrew (IH) shows fewer vocalic or conconantal distinctions. In particular, emphasis and gemination "are no longer manifested" in IH.

9. IBRAHIM, MUHAMMAD MUSA HASAN. "A Study of Gender." Princeton, 1970. 244 pp.
D. A. 31.6 (1970), p. 2900-A. (79–23, 621)
The purpose is to demonstrate that gender, as a grammatical category, did not arise because of any extra-linguistic factors. Evidence is brought to bear through historical linguistic analysis of Semitic and Indo-European languages. Further evidence comes from the assignment of genders to borrowed nouns in several gender-possessing languages, and in Bantu, noun classes are found to be similar to the gender phenomenon. The handling of gender within the framework of a generative grammar is briefly discussed. The section "Gender in Arabic" shows how the ideas presented in the study apply to a specific gender-possessing language.

10. NADKARNI, MANGESH VITHAL. "NP-Embedded Structures in Kannada and Konkani." UCLA, 1970. 320 pp.
D. A. 31.7 (1971), p. 3534-A. (71–668)
A synchronic description of restrictive relative clauses and sentential complements on nouns in Kanada (Dravidian) is "extended to the extent possible" to Konkani (Indo-Aryan). The latter has been in close contact with the former for more than 300 years. Concerning these linguistic features, Konkani is in a stage of transition from basically Indo-Aryan to predominantly Dravidian.

11. ORJALA, PAUL RICHARD. "A Dialect Survey of Haitian Creole." The Hartford Seminary Foundation, 1970. 222 pp.
D. A. 31.11 (1971), p. 6037-A. (71–11, 448)
Four interacting systems are taken into account for identification of any Haitian Creole text: (a) regional dialect system, (b) Gallicizing system, (c) social dialect system, (d) style system. System (a) operates in the framework of various geographical

dialect areas; system (b) allows increase or dercease to French models as a stylistic device since every Haitian Creole speaker "has some knowledge, however little, of what he believes to be French" and this knowledge is superimposed over the other three systems. System (c) consists of contrast between Rural Creole (lesser orientation to French, more regional variants, more Spanish and English influence). System (d) shows structural contrast (greater vs lesser "complexity" of linguistic structure) between formal and informal language.

12. RACINE, MARIE MARCELLE BUTEAU. "French and Creole Lexico-Semantic Conflicts: A Contribution to the Study of Languages in Contact in the Haitian Diglossic Situation." Georgetown University, 1970, 304 pp.
D. A. 32.2 (1971), p. 952-A. (71–19335)

This study investigates the "cognate situation" in Haitian Creole, Haitian French and Metropolitan French. The comparison is restricted to about five hundred "core" words, examining "resemblances" and "divergences" attributed to loans, contacts, interferences and shifts. It was found that of the 527 entries, some were "true," while others were either "false," "extended," "restricted," "degredad," or "euphemisms." It was suggested that although Haitian Creole has derived or borrowed most of its vocabulary from French, it has developed its "own lexico-semantic system."

13. RODGERS, KENNETH HALL. "Studies in Differentiating Analogy in the Evolution of the Romance Present Tense." Columbia, 1970, 257 pp.
D. A. 31.9 (1971), p. 4749-A. (71–6248)

This study looks at the process of analogy in the evolution of the Romance present tense. Three types of analogy are shown to appear in the four major Romance literary languages (Romanian, Italian, French and Portuguese). The analysis is complicated by metaphony in Romanian and Protuguese verbal stems.

14. SOEMARMO. "Subject-Predicate, Focus-Presupposition, and Topic-Comment in Bahasa Indonesia and Javanese." UCLA, 1970. 150 pp.
D. A. 31.7 (1971), p. 3535-A. (71–707)

This study investigates three major constructions in Bahasa Indonesia and Javanese within a transformational grammar framework: (a) subject-predicate constructions (SP), (b) focus-presupposition constructions (FP), and (c) topic-comment constructions (TC). It is suggested that the three constructions are generated from existential sentences. SP- and FP- constructions are derived through the application of meaning-preserving transformations, without assuming that formatives like *focus*, *subject*, etc. are present in the underlying sentences. However, it "cannot be proven" that TC-constructions are derived in the same way.

15. TODARO, MARTIN THOMAS. "A Contrastive Analysis of the Segmental Phonologies of American English and Cairo Arabic." Texas (Austin), 1970. 121 pp.
D. A. 31.4 (1970), pp. 1786–87-A. (70–18, 298)

Attempts to locate structural differences between the segmental phonologies of American English and Cairo Arabic and to use these differences to predict pronunciation errors which speakers of the former will have in learning the latter. The predictions are grouped into four major classes (phonemic, phonetic, allophonic, and distributional), and are verified against a corpus of sentences read by informants in their first year of English language study.

1971

16. **Baradja, Mohammed Farid.** "A Contrastive Analysis of Selected Patterns of the Noun Phrases and Verb Phrases of English and Indonesian." I.C.L.A. 1971. 198 pp.
D. A. 32.2 (1971), p. 943-A. (17—19, 444)

This study compares "the patterns" of English and Indonesian noun phrases and verb phrases within the framework of Chomsky's *Aspects*. On the basis of these comparisons, predictions concerning the difficulties that the tudent will encounter are made. The author outlines some of the assumptions on which the study is based, e.g., "in comparing two languages, certain structures can be considered as *same* and others as *different*."

17. **Bozzini, George Robert.** "Language Teaching in the Bilingual Community: A Tripolar Contrastive Analysis of the Sound Systems of English, Catalan and Spanish for the Purpose of Teaching English to Bilingual Speakers of Catalan and Spanish." Georgetown University, 1971. 242 pp.
D. A. 32.5 (1971), p. 2663-A. (71—28, 053)

This study presents a tripolar contrastive analysis of the segmental phonemes in English, Catalan and Spanish. This comparison is motivated by the fact that in Spanish Catalonia, most students learning English are bilingual in Catalan and Spanish. The theoretical framework used is based on the generative model presented by Jakobson, Fant, Halle, and Chomsky. Statistical results show that underlying and shared deep structures are "a more reliable metric" than phonemic inventories in dtermining how similar or dissimilar linguistic systems are. A hierarchy of the difficulty of the phonological problems which Catalan-Spanish speakers can be expected to encounter in learning English is established.

18. **Chin, Tsung.** "Tensal Systems of Mandarian Chinese and English: A Contrastive Study." Gerogetown University, 1971. 226 pp.
D. A. 32.11 (1972), p. 6402-A. (72—16, 034)

The purpose of this study is to compare the tense systems of English and Mandarin Chinese. The study is motivated by the fact that the auxiliary verbs *have* and *be* and the verb suffixes *-ed*, *-en*, and *-ing* in English as well as the verb phrase particles *le*, *guo*, *de*, *ne* and *je* in Chinese "have long been observed as difficulties" in second language acquisition. English serves as "the reference language" to which Chinese is compared. Predictions of interference of either English or Chinese as the source language are made. "Concrete evidence" shows that the English tense system is "more difficult to acquire" than the Chinese one.

19. **Daigle, Richard Joseph.** "The English and Russian Verb: A Contrastive Study." Duquesne University, 1971. 129 pp.
D. A. 32.9 (1972), p. 5211-A. (72—9861)

The study focuses on formal contrasts between Russian and English verbs, although "semantic clarifications" are introduced in the discussion when the analysis of form "fails to satisfy the learner's curiosity." The Russian data consist of sentences from the autobiography of Yevgeny Yevtushenko. The analysis "works" from Russian forms to English. The results of this study are claimed to be useful for English-speaking students learning Russian as well as students of linguistics.

20. **Howell, Ralph Daniel.** "Morphological Features of the Speech of White and Negro Students in a Southern (Mississippi) Community." The Florida State University, 1971. 212 pp.
D. A. 32.9 (1972), p. 5212-A. (72 – 10, 026)

This study compares the speech of white and Negro students in a southern (Mississippi) community with respect to a number of inflectional and derivational morphemes. White and black students were selected from first, third, fifth, and seventh grades. The study shows (1) that both white and black children enter school without a mastery of the common forms of English morphology, but (2) that white students become proficient earlier.

21. **Long, Ronald W.** "A Comparative Study of the Northern Mande Languages." Indiana University, 1971. 190 pp.
D. A. 32.8 (1972), p. 4593-A. (72-6803)

This study proposes a new internal classification of the Mande family of languages spoken in the western half of West Africa. A set of one hundred word lists for fifteen Northern Mande dialects are compared using a refined lexico-statistical procedure and "directions" for the historical reconstruction of Proto-Mandekan are outlined.

22. **Maran, La Raw.** "Tones in Burmese and Jingpho." University of Illinois at Urbana-Champaign, 1971. 221 pp.
D. A. 32.9 (1972), p. 5213-A. (72. 6994)

This study presents a linguistic description of tonal systems in three major dialects of Burmese and compares these with Jingpho, a related language. With one exception (southern or standard dialect) all other dialects, as well as Jingpho, have tonal systems which are "phonologically redundant."

23. **Miranda, Rocky Valerine.** "Synchronic and Historical Phonology of Six Konkani Dialects". Cornell University, 1971. 112 pp.
D. A. 32.0 (1971), p. 413. (71 – 17, 656)

This study investigates the synchronic and historical phonology of six Konkani dialects (Indo-Aryan): Mangalore Hindu, Mangalore Christian, Bardes Hindu, Bardes Christian, Salcete Hindu, and Salcete Christian. Data were gathered from informants in the same caste (Brahmin) since there are dialect differences "based on caste". The author outlines the morphology, the synchronic phonology, and the "major" morphonemic alternations of the dialects. Phonological changes from Proto-Konkani to the individual dialects are examined on the basis of a comparison of these dialects.

24. **Oluikpe, Benson Omenihu.** "The Grammatical Structure of English and Igbo: A Contrastive Analysis". Howard University, 1971. 311 pp.
D. A. 33.2 (1972), p. 742-A. (72 – 14, 045)

This study contrasts the morphology and syntax of simple basic sentence types in American English and Ngwa, an Igbo dialect. In order to test the predictions of this contrastive analysis with reagard to "trouble spots" that Ngwa-speakers may encounter when learning English, an analysis in terms of grammatical violations of sixty-two letters written in English by Ngwa-speakers was undertaken. The results confirmed those predictions and revealed that the major trouble spots for Ngwa-speakers are related to prepositions, auxiliaries, articles, concord, aspect, the suffix *-in* and "structural patterns".

25. **Suwattee, Duangduen Yurahongs.** "A Linguistic Analysis of Difficulties in the English Verbal System Encountered by Native Speakers of Thai". University of North Carolina at Chapel Hill, 1971. 213 pp.

D. A. 32.2 (1971), pp. 952A-953A. (71–21, 005)

This study compares some verbal structures of English and Thai in order to "discover" the learning problems that native speakers of Thai will encounter when they learn English. Types of linguistic differences between the two systems are established and illustrated. Errors collected from papers by Thai students are used to check the hypotheses and assumptions made in the study.

1972

26. **Brakel, Carl Arthur.** "The Phonological Systems of Sao Romao, Belmonte, and Ourondo: A Study in Structural Dialectology". The University of Wisconsin, 1972. 353 pp.

D. A. 33.8 (1973), p. 4380-A (72–29, 472)

This study presents an "objective and numerical" definition of "dialect". The dialect divisions of Iberian Portugese are reexamined in the comparisons between two prestige dialects, Lisbonese and Carioca, and between Lisbonese and Castilian. The contrastive methodology integrates both phonetic and phonological variation into "the total differentiating aggregate", with phonological variation being "weighted more heavily". As a result, the previous divisions posited in the 1959 dialect map are refuted and a bipartite one is presented.

27. **Chang, Suk-Jin.** "A Generative Study of Discourse with Special Reference to Korean and English". University of Illinois (Urbana-Champaign), 1972. 208 pp.

D. A. 33.10 (1973), p. 5702-A (73–9757)

Focusing on deictic elements, some aspects of discourse are described in the general framework of generative semantics. "Honorific" and "information-focus" are introduced as discourse operators. Sentence types (declarative, interrogative and imperative) are examined ni terms of the modality of the speaker and hearer, with reference to Korean and English.

28. **Chen, Gwang Tsai.** "A Comparative Study of Pitch Range of Native Speakers of Midwestern English and Mandarin Chinese: An Acoustic Study". The University of Wisconsin, 1972. 174 pp.

D. A. 33.4 (1972), p. 1706-A. (72–22, 079)

This study compares the pitch range of four native speakers of Mandarin Chinese and that of four Midwestern English speakers learning Chinese. The results showed (1) that the English-speaking subjects had a very narrow pitch range when they spoke English, (2) that the Mandarin-speaking subjects had a pitch range 154% to 258% wider than that of the English-speaking subjects, and (3) that although the pitch range of the English-speaking subject increased substantially when they attempted to speak Chinese, such an increase was still insufficient. It was suggested that English speakers learning Chinese should be trained to widen their pitch range in order to improve their production of Chinese tones.

29. Gilman, Charles. "The Comparative Structure in French, English and Cameroonian Pidgin English: An Exercise in Linguistic Comparison". Northwestern University, 1972. 223 pp.

D. A. 33.6 (1972), p. 2916-A. (72—32, 441)

This study investigates comparative structures in Cameronian Pidgin (CP), English and French. Theories of linguistic comparison are discussed and a general method proposed for comparing structures in different languages which do not have a common origin. A common underlying structure for the comparative in the three languages is hypothesized from which surface structures may be derived by a set of rules for each language. It is shown (1) that French and English share several rules not found in CP, and (2) that the number of rules needed in CP is much smaller than that in either English or French.

30. Henry, Ilona Julianna. "Computational Statistical Stylistic Analysis of the Noun Phrase in Two Prose Genres in Russian". Brown University, 1972. 218 pp.

D. A. 33.8 (1973), p. 4385-A (73—2282)

This study investigates the grammatical aspect of style employing a context-free phrase-structure grammar in the analysis of the noun phrase (NP) in two genres in Russian prose: "so-called 'learned' materials" (J) and general fictions(K).Comparison son in terms of "the frequency range of a particular syntactic rewrite rule" showed the "structural stylistic parameters" of the two genres. The most significant results are obtained in "the frequency range of simple NP rewrite rules with modifiers". J has a greater number of NPs with modifiers, but the "grammatical style" of K is less complicated. Other detailed results are presented.

31. Jones, Nancy Nell Alsobrook. "*Be* in Dallas Black English". North Texas State University, 1972. 178 pp.

D. A. 33.8 (1973), p. 4386-A (73—2911)

This study describes the use of the verb *be* within the framework of a transformational-generative grammar for the purpose of determining whether or not the verb system of Dallas Black English (DBE) has the same features as those in Black English (BE) in other parts of the U.S. Comparison is also made with Standard English (SE). The data reveal that the grammar of DBE for the most part corroborates findings about BE, and that many of the syntactic and phonological differences between DBE and SE are shared by non-standard white speakers. In DBE, *do - be* is found in non-imperative sentences, indicating "that *do* in DBE functions as a modal auxiliary". In order to account for the use of uninflected or suffix-less *be*, it is assumed "that the grammar of English contains a subcategorization rule" for the choice of modals.

32. Matson, Susan Ann. "Accentual Paradigms in the Baltic and Slavic Verb" The University of Wisconsin, 1972. 465 pp.

D. A. 33.7 (1973), p. 3620-A (72—23, 327)

This study compares the accentual systems of Baltic and Slavic (Russian, Ukrainian, Cakavian, Stokavian, Slovenian, Czech, Lithuanian, and Latvian) to test the hypothesis that the languages share a common original accentual system. Three different stress paradigms (columnar root stress, columnar stress on the theme vowel, and stress on the final syllable) are set up for morphologically defined verb base forms.

Three retraction rules, shared by all eight languages, and a rule to "endow" pre-tonic syllables with rising pitch, plus some individual and analogical rules account for the paradigms. This result supports the hypothesis.

33. **McKay, Jym Motheral.** "Syntactic Similarities in Arabic Dialogossia". The University of Texas at Austin, 1972. 196 pp.
D. A. 33.9 (1973), p. 5155-A (73—7602)
This study attempts to show syntactic similarities between the Cairo Dialect (CD) and Modern Standard Arabic (MSA) employing a transformational grammar framework. One conclusion refutes many grammarians' claim that the Arabic dialects and MSA represent different grammatical systems" It is shown tat CD and MSA have the same underlying structures in simple declarative sentences, relative clause formation, complementation and interrogation, and that the differences in the other features, such as agreement, case endings, mood markers, complementizer and identical noun phrase deletion, are accounted for by transformational rules which are applicable in either MSA or CD, or by different constraints on the application of the rules. Finally, the role of the theoretical analysis in teaching Arabic is discussed.

34. **Paik, Kee Duk.** "Common difficulties in English for Non-native Speakers". University of Illinois (Urbana-Champaign), 1972. 217 pp.
D. A. 33.10 (1973), p. 5709-A (73—10, 019)
The author discusses Korean learners' difficulties in writing English and presents a contrastive study of English and Korean "within a framework of basic English structures as well as single-based transformations". The problem areas discussed are: determiners, two-word verbs, prepositions and some vocabulary items. Suggestions are made concerning teaching materials, dictionaries, and English education in Korea.

35. **Phinit-Akson, Vinit.** "A Tagmemic Contrastive Analysis of some English and Thai Question Constructions." University of Pittsburgh, 1972, 131 pp.
D. A. 33.12 (1973), p. 6896-A (73—13, 257)
This study investigates major question constructions in English and Thai by means of a tagmemic approach involving three steps: providing an equivalence via translation, tagmemic formulation, and comparison. It is seen that English and Thai use different question signals in many of the question types. Even in the similar types of question signals as in *wh-* questions, the distribution of the question tagmeme seems to be different. Similarities and differences are discussed concerning errors made by Thai students learning English as a second language.

36. **Tran, Thi Chau.** "The Concept of Difficulty in Second Language Learning/Teaching". University of Toronto (Canada), 1972.
D. A. 33.9 (1973), p. 5159-A (The National Library of Canada at Ottawa)
This study advocates the use of the students' "own perceptions of difficulty" (SPD) as a means for capturing learning problems which elude both contrastive analysis (CA) and error analysis (EA). A Spanish grammar test was designed to reflect the hierarchy of difficulty in Stockwell, Bowen and Martin's CA of English and Spanish, and administered to English-speaking high school students. The results were analyzed in the light of CA, EA, and SPD, and then the correlation coefficient between the three methods was measured. The findings suggest that the three methods be considered together, EA providing the data for empirical verification, CA the necessary explanatory information, and SPD the learners' judgments.

1973

37. **Azevedo, Milton Marino.** "On Passive Sentences in English and Portuguese" Cornell University, 1973, 196 pp.
D. A. 34.5 (1973), p. 2590-A (73–28, 264)

Passives in Portuguese and English are analyzed "as resulting from a postsemantic Transformation". "Certain sentence types" formed with auxiliaries other than *ser* and *be* respectively are very similar to passives in that they are semantically "close enough". In both languages the same basic structure can yield different sets of patterns. Implications for a pedagogical grammar of Portuguese are discussed.

38. **Borkovec, Vera Zanda.** "Grammatical and Stylistic Uses of Certain Reflexive Forms of Verbs in Czech and in Russian". Georgetown University (1973), 260 pp.
D. A. 34.1 (1973), p. 297-A (73–16, 877)

The author studies certain reflexive forms of verbs in Czech and Russian especially those reflexive verbs which are "grammatically related" to their non-reflexive counterparts. Other reflexive verbs are treated as "lexical reflexives". Three structures (reflexive passives, self-reflexives and reciprocal reflexives) are treated in their relationship to voice. Demipassives are also analyzed in both languages. The role of agent in both languages is a "determining factor" in the degree of passivity.

39. **Boyle, Daniel.** "Generative Phonology and the Study of Gaelic Dialects". University of Michigan, 1973. 233 pp.
D. A. 35.1 (1974), p. 427-A (74–15, 675)

This study is an application of generative phonology to three contemporary Irish dialects with illustrations brought in from Scottish Gaelic dialects. The independence of the three dialects is emphasized. Differentiation is made according to the presence or absence of rules and thier ordering There is a tendency to reduce or eliminate opaque structures in the dialects. Historical knowledge is used to explain many residual forms.

40. **Druien, Robert.** "A Case Form for an Object of a Negated Transitive Verb in Russian with Comments on Ukranian Usage". University of Michigan, 1973. 165 pp.
D. A. 35.1 (1974), p. 429-A (74–15, 707)

This study investigates the usage of the genitive and accustive cases after a negated transitive verb in Russian and Ukranian. The results show differences in the usage of these two cases. For instance, whereas Russian selects the accusative case in many linguistic contexts, no such tendency exists in Ukranian.

41. **Dubrow, Mallary Penny.** "A Generative-Transformational Contrastive Analysis of English and Hebrew for selected Grammatical Structures that are Difficult for the Hebrew-Speaking Learner of English". New York University, 1973. 105 pp.
D. A. 34.6 (1973), p.3370-A (73–30, 060)

This study presents a generative-transformational contrastive analysis of English and Hebrew for selected grammatical structures that are difficult for the Hebrew-speaking learner of English. It is suggested that Hebrew and English deep structures are either identical or similar but the application of transformation rules, which are different in each language, yield different surface structures. The theoretical and pedagogical implications of this study are discussed.

42. GARCIA, RICARDO. "Identification and Comparison of Oral English Syntactic Patterns of Spanish-English Speaking Adolescent Hispanos". University of Denver, 1973. 140 pp.
D. A. 34.6 (1973), p. 3372-A (73—29, 607)
Oral English syntactic patterns from "General American English" are analyzed in the oral sample of Hispano adolescents. Eleven syntactic patterns (for example, questions, passive) of lower-class Hispanos are compared to those od mifdle-class Hispanos. Different percentages of use are reported with "restrictive" codes claimed to be spoken by the lower-class subjects and "elaborative" codes by the middle-class.

43. GINGISS, PETER JUDSON. "Worodugukan: A Comparative and Descriptive Study". Northwestern University 1973. 156 pp.
D. A. 34.6 (1973), p. 3373-A (73—30 590)
This study compares the phonological, morphological and syntactic structure of Worodugukan, a Manding dialect spoken in the west of the Ivory Coast, to that of other Manding dialects (Maninka, Bambara, Gambian Madinka, Kuranko, Eastern Dyula, Commercial Dyula and Vai). It is shown that Worodugukan, in contrast to the other dialects, has additional fricatives and affricates and an additional set of front rounded vowels. On the other hand, the Worodugukan morphological and syntactic structure is found to be similar to that of the other dialects.

44. IWAKURA, KUNIHIRO. "A Generative-Transformational Study of Negation: A Contrastive Analysis of Japanese and English". Michigan State University, 1973. 403 pp.
D. A. 34.3 (1973), p. 1268-A (73—20, 354)
This study is an attempt to formulate an analysis of negation that is applicable to both English and Japanese within the generative-transformational framework. An analysis of negation and quantifiers involving transformations like sentence raising, negative-attachment, and adverbial-movement is proposed first for Japanese and then applied to English to test its validity. The inter-relations of negation and adverbials and the topic of negative-raising are also discussed.

45. KHANITTANAN, WILAINAN. "The Influence of Siamese on Five Lao Dialects". University of Michigan, 1973. 272 pp.
D. A. 35.1 (1974), p. 431—432-A (74—15, 777)
The purpose of this study is to establish the influence of Siamese, the standard dialect of Thailand, on five Lao dialects. The study shows that tones are the only feature that distinguishes these dialects. The Siamese influence appears to be in the sound 'ch' being borrowed into the Lao dialects differentially and in aspiration added to the stop sequences. Certain tones are borrowed and used "interchangeably" with native Lao correspondances. In morphology, there is influence in terms of personal pronouns and noun classification, and gender in particular is adopted as a category. The influences are greater in the younger speakers than in the older ones.

46. OSHIKA, BEATRICE. "The relationship of Kam-Sui-Mak to Thai". University of Michigan, 1973. 164 pp.
D. A. 35.1 (1974), p. 434-A (74—15, 822)
The purpose of this study is to clarify the relationship between Kam-Mak languages of Southern China and the Thai language. The study, in which a 380 lexical word list is used, is based on the assumption that "systematic sound correspondance" will be evidence of a genetic relationship. Data was compiled from Kam, Mak, T'en

and Sui, and from Northern, Central and Southwestern Thai language. Through certain phonological features and lexical distributions, it is shown that the Northern languages are closer to other Thai languages than to Kam-Sui-Mak.

47. PETERS, DANIEL. "A Contrastive Analysis of Selected English and Spanish Written Verb Forms which Present Difficulty to Native Speakers of Spanish". New York University, 1973. 109 pp.
D. A. 34.6 (1973), p. 3377-A (73—30, 111)

English and Spanish verb phrases are compared for the purpose of identifying the "specific learning problems" that Puerto Rican senior high school students may experience. Structural differences between English and Spanish with regard to tense, tense sequence, aspect, auxiliaries and the modal *would* are analyzed. It is noted that this contrastive analysis, based on a variety of the generative-transformational model, "was not sufficiently effective" in pinpointing specific reasons for the verb phrase errors in Puerto Rican students' compositions.

48. RANKIN, DAVID LAWRENCE. "Urban and Rural Syntax: An Analysis Based on American Fiction from 1920—1962".
Rensselaer Polytechnic Institute, 1973. 177 pp.
D. A. 34.5 (1973), p. 2599-A (73—27, 224)

This study compares samples of American prose by urban and rural writers in order to (1) determine whether significant syntactic uniformity characterizes each of the two groups of writers, (2) establish an ecletic approach to stylistics combining traditional analysis, statistical methods, transformational grammar and computer analysis, and (3) account for syntactic differences between the two groups on a cultural and historical basis. The measurements used include length of clauses, sentences and T-units. Some significant differences between the two groups in terms of these measurements are shown. Analysis of segmentation, "the process of replacing an inflection or a set word order with one or more additional words", shows that urban writers rely heavily on segmentalization. A difference in the use of adverbials is also shown to be important.

49. RAO, GALI SAMBASIVA. "A Comparative Study of Dravidian Noun Derivatives". Cornell University, 1973. 277 pp.
D. A. 34.3 (1973), p. 1269-A (73—22, 522)

This thesis deals with the structure and distribution of nominal suffixes in the Dravidian languages on a historical and comparative basis. The data is drawn from the *Dravidian Etymological Dictionary* (1961) and its *Suppliment* (1968). The nominal derivatives are reconstructed and relationships between the nominal and verbal derivatives are discussed. Theories concerning the Dravidian root and some morphophonemic operations are discussed and revised. Minor developments such as the derivation of nouns by lengthening a root syllable, suffix combinations and the phonological developments of the suffix syllable are also dealt with.

1974

50. CHOW, CHUNG-YU CHEN. "A Study of the Nanping Mandarin Dialect of Fukien". Cornell University, 1974. 182 pp.
D. A. 33.5 (1974), p. 2965-A (74—24, 273)

The purpose of this study is to compare Nanping Mandarin dialect with other surrounding dialects. The phonology of Nanping Mandarin is diachronically contrasted with the Middle Chinese dialect in terms of sound change. A synchronic phonological comparative study shows "strong resemblances" between Nanping and the southern types of Mandarin. On the morphonological level, the noun suffix in Nanping is more frequent than in the Mandarin dialects. On the lexical level, Nanping is compared to non-Mandarin dialects of the south and to the Min dialects, and influence is shown.

51. MACKINNON, COLIN ROSS. "The Phonology and Morphology of Dezfuli-Shushtari: A Study in West Persian Dialectology". UCLA, 1974. 292 pp.
D. A. 33.5 (1974), p. 2970-A (74–24, 598)
This study describes and compares the phonology and morphology of the west Persian dialects Dezfuli and Shushtari. The author shows that there is a general tendency in these dialects towards open syllables, accounting for a large numer of "innovations" in these dialects. He also suggests that this tendency motivates a number of widespread Persian umlaut phenomena. In morphology, he discusses "demractive and deictic particles" and categories of verbal morphology.

52. SANCHEZ, ROSAURA. "A Generative Study of Two Spanish dialects". University of Texas at Austin, 1974, 169 pp.
D. A. 35.5 (1974), p. 2971-A (74–24, 930)
This is a comparative study of a standard Mexican dialect and a "popular" Chicano dialect of the American Southwest. A generative approach is adopted since, it is claimed, it shows the extensions of rule applicability in the popular dialect, which is "the natural outcome of rules unchecked in particular instances" by certain social forces related to standardization.

53. WEBER, RALPH EDWARD. "Word Accent in Serbo Croatian Including Comparisons with Russian" The Ohio State University, 1974. 180 pp.
D. A. 33.5 (1974), p. 2973-A (74–24, 424)
This study accounts for accent placement on Serbo Croatian nouns, adjectives, pronouns and verbs through the application of one or more accentual rules. The author also outlines a comparative analysis of Serbo Croatian and Russian in terms of "final phonetic rules, accentual rules and accentual patterns" of the two languages. It is shown that the phonetic rules of Serbo Croatian are different from those of Russian, but that the two languages share the same accentual rules though there is "a disparity in the range of application of each rule". With regard to accentual patterns, the two languages display both correspondence and divergence.

1975

54. CHARLES, ARTHUR HOWARD, JR. "A Comparative Study of the Grammar of Acadian and Cajun Narratives". Georgetown University, 1975. 367 pp.
D. A. 36.9 (1976). p, 6061-A (76–6191)
This study compares the morphology and syntax of Acadian and Cajun. The data consist of three Acadian and four Cajun folk narratives. The morphological aspects examined concern noun modifiers, personal pronouns, and nominal, adjectival and verbal inflections. The syntactic analysis of clause and phrase structure was carried out within a tagmemic framework. The similarities and differences between Acadian and Cajun are summarized in the final chapter of the thesis.

55. **Christy, F. Lynn.** "A Morphological and Semantic Analysis of German Loanwords in Polish and Russian". University of Pensylvania, 1975. 190 pp.
D. A. 36.8 (1976), p. 5258-A (76—3158)
This study discusses the similarities and differences between Polish and Russian in terms of German loan words and how each language absorbs into the native pattern or keeps separate from it a given body of loanwords. The loanwords examined were obtained from available standard dictionaries. Several conclusions concerning the patterns of German borrowing into both languages are presented. It is found, for example, that Russian imitates as closely as possible the German phonetic form, whereas Polish shows a more hybrid form. Also, Polish imposes a Polish stress pattern on the borrowed word, whereas Russian favors "end-stress".

56. **Hundirapola, Ratanajoti.** "The Syntactic Structure of Sinhalese and its Relation to that of the other Indo-Aryan Dialects". The University of Texas at Austin, 1975. 143 pp.
D. A. 37.1 (1976), p. 266-A (76—14, 473)
The syntactic patterns of placement of noun and verb modifiers and arrangement of constituents in coordinate and subordinate constructions in Old Sinhalese and Modern Modern Spoken Sinhalese are compared to corresponding patterns in other Indo-Aryan languages. It is shown that there exist similarities between old Sinhalese and other Indo-Aryan languages with respect to these patterns. The differences between Modern Sinhalese and Indo-Aryan are attributed to "a change in Sinhalese brought about after its separation from Indo-Aryan by its contact with Tamil".

57. **LoCoco, Veronica Gonzalez-Mena.** "An Analysis of Errors in the Learning of Spanish and of German as Second Languages". Stanford University, 1975. 131 pp.
D. A. 36.9 (1976), p. 6065-A (76—5762)
Samples of student writing from Americans studying Spanish and German were collected. A comparison of the errors in each of the target languages is presented and a "hierarchy of difficulty" is devised. It is concluded that difficulty in a target language is *not* caused by "a contrast between the languages involved". Complexity of target language structure, as compared to native language structure is the source of the difficulty.

58. **Manomaivibool, Prapin.** "A Study of Sino-Thai Lexical Correspondences". University of Washington, 1975. 441 pp.
D. A. 37.2 (1976), p. 945-A (76—17, 554)
This dissertation studies standard Thai words "that appear to be related in some way to Chinese". Phonological difficulty and "complications" in the comparison of the two languages are discussed. It is shown by comparative analysis that "the relationship between Chinese and Thai can be appraoched with four different hypotheses": a possible genetic relation, borrowing from Chinese to Thai, borrowing from Thai to Chinese and borrowing from a third language. These hypotheses and different layers of borrowing are the reasons for the above-mentioned complications.

59. **Phillips, John Seward.** "Vietnamese Contact French: Acquisitional Variation in a Language Contact Situation". Indiana University, 1975. 439 pp.
D. A. 36.8 (1976), p. 5263-A (76—2878)
This study compares surface phenomena (e.g. ,pronouns, definiteness markers, modals, aspect and tense markers, negatives, relative clauses, passives, etc) in French based creoles (FC), Vietnamese Contact French (VNCF) and French Child Speech (FCS).

VNCF and FCS "resemble each other" in several characteristics, e.g., the way in which French elements are segmented. They differ mostly in pragmatic terms. Some acquisition hypotheses are explored. It is also suggested that the similarities among FC, VNCF and FCS demonstrate the non-necessity of the reflexivization hypothesis for the development of pidgins and creoles.

60. SUKTRAKUL, SUTHINEE. "A Contrastive Analysis of Relative Clauses in Thai-English". Rutgers University, 1975. 136 pp.
D. A. 36.10 (1976), p. 6653-A (76-8708)
This study presents a contrastive analysis of relative clauses in English and Thai and examines possible interference phenomena between the two languages. The results show that "the basic characteristics of Thai relative clause formation are found to be similar to those of English". However, there are "some significant parameters" along which Thai grammatical structures differ from those of English.

61. WALZ, JOEL CHANDLER. "A Longitudinal Study of the Acquisition of French Pronunciation". Indiana University, 1975. 134 pp.
D. A. 36.8 (1976), p. 5265-A (76—2905)
This study describes the pronunciation of French segmental phonemes by American students learning French. The sounds produced by the subjects were found to be extremely varied and only partially predicted by the contrastive analysis. It was discovered that other factors unrelated to first language "interference" seemed to be responsible for the students errors.

1976

62. BUTAR-BUTAR, MARULI. "Some Movement Transformations and their Constraint in Indonesian". Indiana University, 1976. 247 pp.
D. A. 37.8 (1977), p. 5089-A (77—1980)
This study includes two comparisons concerning English and Indonesian: (1) It is shown that Indonesian passives are similar to English passives in that "both have the same order of constituents in surface structure"; and (2) Indonesian relativization is "not limited by the *Complex NP Constraint* and the *Coordinate Structure Constraint* while English relativization is". Indonesian is also found to be "more accessible" to relativization than English, since its relativization strategy is "more isolating".

63. FEAGIN, LOUISE CRAWFORD. "A Sociolinguistic Study of Alabama White English: The Verb Phrase in Anniston (Volumes I and II)". Georgetown University 1976. 637 pp.
D. A. 38.6 (1977), p. 3445-A (77—26, 390)
This dissertation presents a quantitative analysis of linguistic features of verb phrases (i.e., tense, voice, aspect, modality, agreement, negation and copula deletion) in the speech of whites from the American south, primarily Alabama. A comparison between this southern variety of English and Black English is also made. The results show that Southern White English and Black English are "qualitatively the same but they differ quantitatively in certain cases, especially for third person singular agreement and *is* deletion". It is also shown that Nonstandard Southern White English "is more closely related to nonstandard Northern U.S. English, British Dialect, and older forms of English than to the English-based Creoles of Jamaica and Guyana".

64. Foley, William Auguste. "Comparative Syntax in Austronesian". University of California, Berkeley, 1976. 249 pp.
D. A. 37.9 (1977), p. 5792-A (77–4453)
This study presents a comparison of the syntax of Austronesian languages at two levels of grammar: the noun phrase and the clause. A universal typology of noun phrases is suggested and it is shown that in Austronesian the Adjunct+Noun constructions are characterized by special particles that link adjunct modifiers to their head nouns. A universal theory of clause structure is proposed and an in-depth description of languages of Philippine and Oceanic types is provided.

65. Gray, Barbara Quint. "Auxiliary Structure and Syntactic Maturity in the Naturalistic Speech of 3-to-5 Year Old Lower-Class Urban Black Children". New York University, 1976. 190 pp.
D. A. 38.2 (1977), p. 761-A (77–16, 427)
This study investigates the syntax and verb features in the speech of three-to-five year old urban, lower-class, black children in order to compare their "syntactic maturity" to that of white middle-class children of the same age. The syntactic measurements used are the Mean Utterance Length, the type of transformations used and the number of sentence combining transformations per T-unit. The results show that the black children's syntactic maturity is *comparable* to that of their white counterparts. The *differences* were mainly due to the omission of tense-bearing elements and to restrictions on transformations. There was no evidence for deep structure differences.

66. Larimore, Nancy Kaufman. "A Comparison of Predicate Complementation in Krio and English". Northwestern University, 1976. 162 pp.
D. A. 37.7 (1977), p. 4328-A (77–1285)
A transformational generative framework based on Stockwell, Schachter and Partee 1973 is used to compare predicate complementation between English and Krio, an English-based creole spoken in Sierra Leone. It is shown that "Krio structures in two cases are similar to those found in English and in two cases are considerably different". Complement structures that differ from English appear to be of African origin. It is concluded that Krio's complement system differs substantially from that of English and that these differences are primarily "the result of simplification and subsequent West African substratal influence with other factors playing a secondary role".

67. Ossai-Emeli, Cecilia Ijeuwa. "A Descriptive Contrastive Analysis of English and Igbo Verb Systems". Boston University, 1976. 137 pp.
D. A. 36.9 (1976), p. 6066-A (76–6635)
A comparison between English and Igbo verb systems, using a modified version of Lado 1957, was undertaken in order to (a) identify structural differences that might present learning difficulties to Igbo high school students learning English, and (b) validate the contrastive analysis predictions. A test based on selected structural differences between English and Igbo verb systems was administered to 105 Igbo high school studentsi n Nigeria and the results show that "structural differences between the native and target languages tend to cause learning problems" for the students. Difficulty of a given English structure "is corrolated to the degree of its divergence from its Igbo counterpart".

68. **Rivas, Daniel Jose.** "Prepositions in Spanish and English: A Contrastive Study and Sample Thesaurus Based on the Spanish Word Count Taken at the University of Puerto Rico, 1952". The Florida State University, 1976. 369 pp.
D. A. 37.6 (1976), p. 3594-A (76–28, 635)

The study investigates the differences and similarities in Spanish and English prepositional usage "in relations of the accusative, adjectival, ablative and dative type". It is suggested that prepositional usage in those two languages is "changeable, erratic, and unruly". The author proposes, as "a practical answer to this problem of bilingual interference", a sample thesaurus.

69. **Sapitmaz, Musa.** "A Contrastive Analysis between English and Turkish Question Transformations". Rutgers University, 1976, 171 pp.
D. A. 37.12 (1977), p. 7727 (77–13, 287)

This study investigates the syntactic difficulties of Turkish learners of English as a foreign language, using contrastive analysis as an analytical tool. The study concentrates on two question transformations: yes/no questions and wh-word transformations. In predicting the source of errors, two "language learning strategies" are studied: "interlingual" and "intralingual".

70. **Stein, Audrey R.** "A Comparison of Mothers' and Fathers' Language to Normal and Language Deficient Children". Boston University, 1976. 212 pp.
D. A. (1976) ,p. 1519-A (76–21, 259)

The purpose of this study was to compare mothers' and fathers' speech addressed to children. Stylistic differences were shown to exist: Fathers told longer stories and paraphrased significantly more. Mothers provided significantly more "added information" for "normal children", whereas fathers provided more for "deficient children". Also a "special verbal style" appears to exist between normal children and their mothers, and language deficient children and their fathers.

71. **Walusimbi, Livingstone.** "Relativization and Focusing in Luganda and Bantu" UCLA, 1976. 107 pp.
D. A. 37.6 (1976), p. 3995-A (76–25, 247)

This study compares the formation of relative clauses and the phenomenon of focusing in Luganda and other Bantu languages. It is shown that, unlike other Bantu languages, Luganda violates the universal principle of pronoun attraction in relativization. To account for the Luganda case, the author suggests a principle of "relative pronoun-verbal attraction".

72. **Williams, Wayne Richard.** "Linguistic Change in the Syntax and Semantics of Sierra Leone Krio". Indiana University, 1976. 270 pp.
D. A. 37.8 (1977), p. 5097-A (77–1948)

The study discusses the influence of English and Yoruba on the development of Sierra Leone Krio. It is suggested that, although the lexicon of Krio is composed largely of words of English origin, the various Syntactic patterns in which these items function are much more akin to Yoruba than to English. A comparison between Yoruba and Krio shows that numerous Krio structures are "accountable when viewed as a change in the Yoruba system through creolization". The author claims that "this analysis gives substance to the notion of substratum influence".

1977

73. Davidson, Joseph. "A Contrastive Study of Grammatical Structures of Aymara and Cuzcokechua". University of California, Berkeley, 1977. 369 pp.
D. A. 38.7 (1978), p. 4782-A (7731330)
This is a contrastive study of Aymara, a language from the Jaqi family, and Cuzco, a Kechuan dialect, with primary focus on suffixes, their semantic features and internal syntax. The purpose of the study is to investigate the genetic relationship between the two agglutinative language families. The results show no significant correspondence in the ordering of the semantic features after the root.

74. Graves, Anne Victoria Adams. "The present State of the Dutch Creole of the Virgin Islands". The University of Michigan, 1977. 257 pp.
D. A. 38.3 (1977), p. 1356-A (77–18011)
This investigation of the development of the Dutch Creole cf the Virgin Islands indicates that the lexicon of this creole is of Dutch origin "superimposed" onto a West African grammatical structure. A comparison of the Dutch Creole with its sister creoles shows, for instance, that "verb aspect phenomena" exist in other areas of the Caribbean speech community and that they are of African rather than European origin. The influence of English on the Dutch Creole was found to be mainly in the area of vocabulary.

75. Harmon, Carol Jean. "Kagayanen and the Manobo subgroup of Philippine Languages". University of Hawai, 1977. 336 pp.
D. A. 38.9 (1978), p. 5433-A (7801045)
This dissertation discusses evidence supporting various theories of subgrouping for Kagayanen in the Philippine branch of the Austronesian family of languages. Included are phonological descriptions of Kagayanen in a stucturalist framework as well as a grammatical description in a lexicase framework. Kagayanen is compared) to languages spoken in areas close to the Cagayan Islands (e. g., Batak and Cebuano and to six Manobo langusges. It was found that Kagayanen shared many grammatical features with Manobi but very few with the other languages and, thus, was classified as a Manobo language.

76. Jeremiah, Milford. "The Linguistic Relatendess of Black English and Antiguan Creole: Evidence from the Eighteenth and Nineteenth Centuries". Brown University, 1977. 249 pp.
D. A. 38.9 (1978), p. 4788-A (7732605)
This study aims at showing the relationship between Antiguan Creole (AC) and Black English (BE), using a generative framework. The results show a large number of phonological and grammatical features common to both languages. The observed grammatical differences between AC and BE are attributed to the presence or absence of certain rules.

77. Kageyama, Taro. "Lexical Structures: A comparative Study of Japanese and English". University of Southern California, 1977.
D. A. 38.7 (1978), p. 4789-A
This study analyzes the semantic and syntactic properties of Japanese words in a number of semantic fields (motion, temperatures, dressing and undressing, and opening and closing) with systematic reference to their English equivalents. In particular a comparison of the constraints on non-incorporating verbs in Japanese and English is made. The analysis is done within a transformational generative framework

78. MARKEY, PATRICIA. "Tahitian French: A Study in Tense and Aspect". The
The University of Michigan, 1977. 105 pp.
D. A. 38.11 (1978), p. 6691-A (7804764)

The purpose of this study is to analyze the tense-aspect system of Tahitian French. In order to do this, an analysis of the tense-aspect system was presented for Tahitian and French, then for Tahitian French. The analysis was based on the schema of Kurylowicz. A comparison of the tense-aspect system of these languages was then conducted. The results show basic differences in the function of the markers in French and Tahitian. The study indicates that the tense-aspect system of Tahitian French "cannot be analyzed as an unadulterated borrowing from Tahitian, but as an analogical compromise".

79. PIEWES, STANLEY FRANK. "Semantic Invariance and Case Function in Czech and Russian". Princeton University, 1977. 393 pp.
D. A. 38.4 (1977), p. 2095 (77–21, 472)

This study investigates Czech and Russian verbs governing objects that appear in oblique cases without prepositions. Verbs governing, genitive, instrumental and dative objects are considered, using Jakobson's concept of semantic invariance and Fillmore's concept of case.

80. ROSIN, AYIVA. "The Value of Contrastive Analysis *a priori* in Predicting Interference in Learning the Syntax of a Foreign Language: A Study of Selected Grammatical Structures in Hebrew and English". New York University, 1977. 331 pp.
D. A. 42.5 (1981), p. 2118 (8124238)

This study compares selected grammatical structures of English and Hebrew in order to test whether contrastive analysis *a priori* is a reliable tool for predicting interference in learning the syntax of a foreign language. The direction of the comparison was both ways, from Hebrew to English and from English to Hebrew. The results show that "interlinguel" differences are an important source of difficulty for the learner but also that "intraligual" difficulties should be taken into account.

81. RYPA, MARIKKA ELIZABETH. "A Contrastive Analysis of the German Prefix *be-* and Its Synchronic Manifestations in English". Stanford University, 1977. 215 pp.
D. A. 38.3 (1977), p. 1366-A (77–18, 244)

This study investigates the German preverbal prefix *be* and its English eqiuvalent. The choice of the *be-* prefix among other German verbal prefixes is motivated by the fact that it is "the only one to have at least partial direct correspondence in English". It is shown that the range and frequency of *be-* is far greater in German than in English.

82. SIDDIQUI, AHMAD HASSAN. "The Syntax and Semantics of Questions in English, Hindi and Urdu: A Study in Applied Linguistics". The Ohio State University, 1977. 243 pp.
D. A. 38.5 (1977), p. 2749-A (77–24, 703)

This study presents a contrastive analysis of questions in English, Hindi and Urdu within a generative transformational framework. Semantic and pragmatic factors are also used in the description of interrogative construction in the languages involved. Also, relevant aspects of error analysis and interlanguage are discussed.

83. WOOLFORD, ELLEN. "Aspects of Tok Pisin Grammar". Duke University, 1977. 244 pp.
D. A. 38.12 (1978), p. 7307-A (7807644)

The purpose of this study is to analyze certain aspects of Tok Pisin (TP) grammar and to compare them to analogous constructions in English. The aspects discussed are the generation of pronouns, question formation, negation, possessive constructions, serial verb constructions, passive transformations and the syntax and semantics of prepositional phrases. A transformational framework was used. No rule of *wh*-movement or subject-auxiliary inversion exist in TP and negatives in TP, unlike English, "are generated only in the first or left-most position in the predicate". There are other negative differences, and differences in the "generation of pronouns" and possessive constructions are also shown to exist.

1978

84. **Ababneh, Jafar.** "The Morphophonemics of Pluralization in Biblical Hebrew and Classical Arabic". University of Utah, 1978. 170 pp.
D. A. 39.2 (1978), p. 845-A (7813794)

This is a morphophonemic contrastive study of pluralization in Biblical Hebrew and Classical Arabic with pedagogical implications. The main finding concerns the internal changes in both Arabic and Hebrew. In Arabic these changes signal morpho-semantic "transitions" whereas in Hebrew pluralization involves automatic vowel changes that accompany suffixation in general. As a result, the author recommends the use of an "item and process" model of analysis in the teaching of Arabic broken plurals, and an "item and arrangement" model for Hebrew plurals and Arabic sound plurals.

85. **Bhatia, Tej Krishan.** "A Syntactic and Semantic Descritpion of Negation in South Asian Languages". University of Illinois at Urbana-Champaign, 1978. 205 pp.
D. A. 39.1 (1978), p. 258-A (7811210)

This study deals with the syntax and semantics of negation in six South Asian Languages: Hindi, Marathi, Nepali, Punjabi, Kannada and Kashmiri. It is shown that thee languages follow two syntactic patterns: In Hindi and Punjabi the negative particl- is realized in the preverbal postion but in the postverbal position in the other four languages. It is also shown that the surface distribution of NEG particles in these languages is semantically and not morphologically conditioned. Topics such as "Quantifiers and Negation", "Neg-Raising" and "Negation and Subordination" are also discussed.

86. **Fischer, Mary.** "Deutsche und Englische Funktionsverbgefuge: Ein Vergleich". Georgetown University, 1978. 178 pp.
D. A. 39.2 (1978), p. 849-A (7814083)

This study (written in German) attempts to identify a system of English Function Verbs (e.g., *bring* in *bring to an end*) and to describe the relationship between English Function Verb Phrases and German *Funktiobsverbgefuge*. In both languages these types of verb phrases consist of a verb, a preposition and a noun, indicate a "mode of action", and are used stylistically in the same way. A large number of them are used in passive constructions. Based on the "equivalence principle", English Function Verb Phrases are isolated from other expressions showing "modes of action".

87. **Hsu, Yi-Chin.** "Comparative Structures in English and Mandarin Chinese". The University of Michigan, 1978. 197 pp.
D. A. 39.2 (1978), p. 850-A (7813657)

This study presents a cross-linguistic analysis of English and Chinese comparative sentences. Adjectival, adverbial and nominal comparisons with single and multiple lexical contrasts are considered. A generative semantics analysis revealed that the semantic representation for English and Chinese comparatives is very similar. The surface differences between the two languages is accounted for by the general Modifier-Head Constraint to which English is not subject. It is also shown that multiple contrast comparatives are more frequent in English than in Chinese.

88. MITANI, YASUYUKI. "Phonological Studies in Lawa: Description and Comparison". Cornell University, 1978, 168 pp.
D. A. 39.4 (1978), p. 2225-A (7817869)
This study compares four dialects of Lawa, a Mon-Khmer language spoken in Northern Thailand, in terms of their segmental phonemes and syllable structure in order to reconstruct the phonology of Proto-Lawa. The dialects considered are Boluang, Umphai, La'opp and Ban Phae. It is shown, for instance, that "the reconstructed Proto-Lawa initials are mostly similar to the initials of the present dialects but there are some that the latter does not have".

89. PAPEN, ROBERT. "The French-Based Creoles of the Indian Ocean: An analysis and Comparison". University of California, San Diego, 1978. 666 pp.
D. A. 39.3 (1978), p. 1520-A (7814991)
The purpose of this dissertation is to analyze and compare the dialects of French-based Indian Ocean Creole (IOC) spoken on the islands of La Reunion, Mauritius, Rodrigues, the Seychelles and the Chagos Archipelagos. A generative model was used as a framework. Each dialect was analyzed separately in terms of its phonological segments, morpheme structure, phonetic and phonological rules, major derivational processes, and phrase structure rules, with special attention to the tense-aspect systems. A comparison was then made with the other dialects. The similarities between the dialects were discussed, in particular the ones manifested in the phonological and lexical components. Major differences were found in the tense-aspect marker system and in the status of the copula.

90. ROSSING, MELVIN OLAF. "Mafa-Mada: A Comparative Study of Chadic Languages in North Camroun". The University of Wisconsin-Madison, 1978. 408 pp.
D. A. 39.3 (1978), p. 1521-A (7811740)
The study provides a description of the Mafa-Mada group of languages and, on the basis of correspondences, a reconstruction of Proto-Mafa-Mada phonology and lexicon was made. A systematic comparison of the Mafa-Mada languages and other Chaidc languages "has suggested amendments to the reconstructed phonological inventory of Proto-Chadic". For example, it is shown that Proto-Chadic had "two contrasting voiceless stops and two perhaps corresponding fricatives".

1979

91. FLOREZ, GLORIA ADRIANA. "Contrastive Study of Quechua Morphology and Corresponding Spanish Structures". Columbia University Teachers College, 1979. 155 pp.
D. A. 40.9 (1980), p. 5032-A (8006807)
This study presents a contrastive analysis of the morphology of the Quenchua dialect of Cajamarca, Peru, and standard Peruvian Spanish. The study deals with morphological processes, parts of speech and affixes. The main differences between the two language systems are related to number agreement, gender, possessive constructions, verb system, subordination, object and reflexive pronouns and relative pronouns.

92. Garbacz, Stephanie Klosinski. "Sanskrit and Old Church Slavonic: A Comparative Study of Case Systems". Georgetown University, 1979. 373 pp.
D. A. 41.4 (1980), p. 1569-A (8021266)

This study is a comparative analysis of the case systems in Sanskrit and Old Church Slavonic. The first part of the study deals with the morphological and syntactic aspects of the case systems in both languages and evidence for shared, innovated and divergent aspects of the nominal is provided. In the second part, the author examines the deep structure case relationships between nouns and verbs within the framework of Anderson's "localistic" case grammar model.

93. Kottum, Steiner Egil. "A Semantic Distinctive Feature Analysis of the Polish Case System with a Comparison to Russian". Indiana University, 1979. 171 pp.
D. A. 40.4 (1979), p. 2038-A (7921293)

This study presents a comparison between the case system of Polish and Russian within a formal semantic framework derived from the Prague School linguistic theory. the case system is analysed in terms of foru semantic features: perceptibility, directionality, quantification and marginality. It is shown that although Russian has no vocative, the total number of cases is the same for both Polish and Russian because Russian has two locative cases. The semantic features are the same in both languages except for perceptibility which is not found in Russian.

94. Marches, Lynell. "Tense/Aspect and the Development of Auxiliaries in Kru Language Family". UCLA, 1979. 520 pp.
D. A. 40.7 (1980), p. 4006-A (8002492)

The purpose of this study is to compare tense, aspect and negation in several Kru languages in order to reconstruct certain basic structures and determine what historical developments have occurred. This comparison led to the reconstruction of Proto-Kru markers for the factive and incompletive aspects and a negative marker for the non-factive clauses. It is also claimed that the Kru word order, S Aux O V, is derived from a source construction S V1 0 V2, where 0 V2 functions as the object of V1.

95. Quizar, Stephanie (Robin) O. "Comparative Word Order in Mayan". University of Colorado at Boulder, 1979. 263 pp.
D. A. 40.8 (1980), p. 4576-A (8003007)

This study compares word order in 21 Mayan languages and points out implications for word order change in these languages. It is shown that three basic word orders are represented in Mayan, VOS, VSO and SVO, with the VOS order being the most common and SVO represented by only one language. It is assumed that all Mayan languages had a verb-initial word order and that motivation for a shift in basic word order to SVO has been potentially available to these languages through contact with SVO languages and internal structural pressures. The study also shows that different word orders are concomitant with particular morphological markings.

1980

96. Booker, Karen M. "Comparative Muskogean: Aspects of Muskogean Verb Morphology". University of Kansas, 1980. 306 pp.
D. A. 41.5 (1980), p. 2084-A (8026662)

A comparison between the verb morphology of extent Muskogean languages, a family of American Indian languages, is undertaken in order to reconstruct the verb system morphology of Proto-Muskogean. Auxiliaries, agreement affixes and aspect and tense markers are considered. The comparison of internal modifications of verb stems indicating aspectual distinctions supports the reconstruction of four types of morphological marking corresponding to different aspects. The analysis also shows that although extant Muskogean languages mark tense by suffixation, the parent language expressed temporal distinction periphrastically.

97. DELSHAD, SABER. "Persian and English Prepositions Compared and Contrasted from a Pedagogical Point of View". The University of Texas at Austin, 1980. 268 pp.
D. A. 41.7 (1981), p. 3085-A (8100895)
This study compares and contrasts prepositions in Persian and English. The analysis of Persian prepositional phrases is based on data from five Persian novels and a daily Persian newspaper, and uses Quirk *et al's* method (1972). The results showed that, in general, Persian prepositional phrases "roughly fit" into the same general syntactic-semantic categories as the English prepositional phrases. However, some divergences were also found ,e.g. a Persian prepositional phrase may correspond to an infinitive clause in English but not vice versa.

98. HILL, EDWARD CHARLES. "The Specification of Underlying Aspectual Values: A cCase Study with Particular Reference to Hindi and Telugu". The University of Wisconsin-Madison, 1980. 155 pp.
D. A. 41.10 (1981), p. 4384 (8102203)
This study presents a model for the analysis of verbal aspect. It is suggested that the aspectual value of a surface structure verb form is determined by underlying abstract aspectual values. This model is then applied to the verb systems of Hindi and Telugu. The particulars of the aspectual system of each language are outlined but it is suggested that underlying phenomena are the same in both languages. A description of English progressive is also presented using the same model.

99. PURKHOSROW, KHOSROW. "A Contrastive Analysis of Persian and English Reported Speech and the Effects of Interference and Transfer in Learning English as a Foreign Language". University of Illinois at Urbana-Champaign, 1980. 205 pp.
D. A. 41.12 (1981), p. 5084-A (8108633)
This study presents an analysis of errors made in the use of reported speech by Persian learners of English in order to determine (1) whether L1 transfer is a major strategy used by these students, (2) whether low profeciency students show more adherence to L1 transfer, (3) whether contrastive analysis is a useful tool for predicting students errors, and finally (4) whether translation enhances L1 transfer. The results show that transfer is a major strategy used by the subjects but with increased proficiency the role of transfer dimishes. The results also suggest that contrastive analysis can explain and predict students' errors. The hypothesis that translation encourages transfer could not be confirmed.

100. TSUDA, AOI. "An Ethanographic Study of Sales Events and Salesman Talk in the American and Japanese Speech Communities". Georgetown University, 1980. 379 pp.
D. A. 42.4 (1981), p. 1620-A (8122477)
This study presents a comparison of sales events and salesman's talk in the American and Japanese speech communities, using Hymes' framework (1972). The data examined consist of actual sales transactions and background information about buying and selling through questionnaires and interviews. The author presents

an analysis of overall patterns of sales transactions pointing out similarities and differences in the two speech communities. Detailed descriptions of particular types of transactions (e.g., institutional sales, sales in department stores and door to door sales) are also presented. The findings support a basic assumption of ethnography of communication: in social interaction, communication processes are "governed by culture-specific rules and norms for the use of speech in each speech community".

101. WIJASURIA, BASIL SRISENA. "A List of Testable Items Based on a Contrastive Analysis of Malay/English and Error Analysis of Students' Compositions with a Profeciency Test Based on These Items". Georgetown University, 1990. 321 pp.
D. A. 41.4 (1980), p. 1573-A (8021274)

This study compares the syntax of Malay and English and identifies possible areas of difficulty for Malay speakers learning English. Where certain forms or structures occur in the target language, English, which do not occur in the native language, Malay, "an attempt is made to discuss how the same concept or meaning" is expressed in the native language. The list of possible errors predicted by this contrastive analysis, in addition to another list of errors that have a source other than L1 interference, serve as the basis for the construction of a multiple choice test of English syntax for Malay students.

102. WILSON, MARILYN JUNE. "Syntactic and Discursive Differences between Casual Oral and Formal Oral Styles in the Narratives of Third and Sixth Graders". Michigan State University, 1980. 219 pp.
D. A. 41.7 (1981), p. 3082-A (8101191)

This study compares casual oral and formal oral speech of third and sixth graders in terms of syntactic complexity and discourse structure. The data consist of stories told by the subjects on two different occasions, one casual, the second, formal. The results show that syntactic complexity for both grades increases from casual to formal styles. It is also shown that formal styles exhibit an increase in motivation, greater coherence and greater development of characterization. Evaluated narrative also is produced more frequently in the formal style. The major difference between the two grades appears to be in the discourse structure rather than in syntactic complexity.

1981

103. BLODGETT, TERRY. "Phonological Similarities in Germanic and Hebrew". University of Utah, 1981. 170 pp.
D. A. 42.8 (1982), p. 3581-A (8202834)

This dissertation investigates the similarities between the Germanic and Hebrew languages, particularly in the areas labeled "foreign" to Indo-European. These similarities were discovered in the areas of phonology, morphology and lexicology. Phonological similarities pertain to the sound changes in Germanic, in particular the sound shift of six sounds (ṗ, ṫ, k̇) and (ḃ, ḋ, ġ) to (f, p, x) and (b, d, g). These are the same sounds which "change phonemically in Hebrew". The author also claims that verb conjugations are similar in both languages and that the "vocabulary listed in the etymological dictionaries as being of unknown origin is similar to Hebrew vocabulary".

104. **Botne, Robert.** "On the Nature of Tense and Aspect: Studies in the Semantics of Temporal Reference in English and Kinyarwanda". Northwestern University, 1981. 480 pp.
D. A. 42.9 (1982), p. 3979-A (8204886)

The author proposes an approach to the semantic analysis of tense and sapect, an approach based on on the concept of "temporal frames which function either to index a situation as a point of orientation, or to index a particular aspect of the temporal structure of a situation". This approach is used to analyse temporal expression in English and Kinyarwanda, a Bantu language. The two languages are compared in terms of equivalence of "similar" expressions and in terms of semantic arrangement of verbal categories. An attempt is made to determine the extent to which the semantic arrangement of verbal categories is equivalent. The results suggest that there are three levels of organization that must be investigated to determine synonymy: (1) underlying temporal structure (2) functional nature of the temporal frames, and (3) restrictions on the potential range of interpretation of a particular combination of frames. It is also suggested that the semantic organization of verbal categories varies minimally from language to language and is to a large extent independent of surface structure phenomena.

105. **Constenla, Adolfo.** "Comparative Chibachan Phonology". University of Pensylvania, 1981. 489 pp.
D. A. 42.12 (1982), p. 5106-A (8207943)

This study presents a phonological comparison involving five extant Costa Rican languages (Guatuso, Cabecar, Bribri, Terraba and Boruca) and an extinct Colombian language, Muisca, in order to reconstruct the protophonemes of these languages. The comparison yielded and inventory of proto-phonemes including twenty segmental phonemes, in addition to nasalization, stress and two tones, one high, the second low. Two consonant clusters (*pk and *ts) were also reconstructed. Shared innovations in the six languages considered suggested a division in this language family between Bribri, Cabecar and Terraba on the one hand and Guatuso, Boruca, and Muisca on the other.

106. **Hirose, Masayoshi.** "Japanese and English Contrastive Lexicology: The Role of Japanese Mimetic Adverbs". University of California, Berkeley, 1981. 229 pp.
D. A. 42.7 (1982), p. 3137-A (8200136)

This is a contrastive study of characteristic lexicalization patterns in English and Japanese. It is limited to five semantic domains: Walking, laughing/smiling, pain, water noises, and light emission/reflection. The results indicate that, in general, English expressions in these five domains are typically monomorphemic, whereas corresponding Japanese expressions consist of the basic verb modified by a preceding adverbial indicating characteristics of manner, attitude or sound. An exception to this is in the domain of pain in English where primary lexical expressive resources are used.

107. **Hudak, Thomas John.** "The Indigenization of Pali Meters in Thai". The University of Michigan, 1981. 278 pp.
D. A. 42.6 (1981), p. 2652-A (812513)

This study presents an analysis of the indigenization in Thai of Pali meters in order to determine Thai linguistic constraints and peotic principles that play a role in the transformation of the Pali meters and stanzas into their Thai equivalents. The analysis includes "a syllable by syllable and line by line comparison of the original Pali meters and stanzas and their Thai counterparts".

108. **Justice, David Bruce.** "The Semantics of Form in Arabic, in the Mirror of European Languages". University of California, Berkeley, 1981. 628 pp.
D. A. 42.12 (1982), p. 5107-A (8211978)
This study presents a description of literary Arabic with "frequent comparisons" to some western languages, mainly English, French and German. The topics explored range from "the prevalence of homonymous antonyms" and redundency to morphosemantic complexes such as *tymyiz* or specification and derived causatives.

109. **Kubler, Cornelius Charles.** "The Development of Mandarin in Taiwan: A Case Study of Language Contact". Cornell University, 1981. 211 pp.
D. A. 42.4 (1981), p. 1617-A (8119529)
This study discusses the development of Mandarin in Taiwan with emphasis on the influence on Mandarin of several languages, primarilty Southern Min. A brief discussion of influences of other languages (e.g., classical Chinese, Japanese and English) is also included. Phonological, syntactic and lexical influences are considered within the theoretical framework presented in Weinreich's *Languages in Contact.*

110. **Levenberg, Joel Thomas.** "A Semantic Analysis of Aspect in Russian and Serbo Croatian". Indiana University, 1981. 198 pp.
D. A. 41.12 (1981), p. 5082-A (8112446)
A semantic comparison of the verbal aspect in Russian and Serbo Croatian is presented within a theory of semantic structure developed by C. H. Van Schooneveld. It is shown that the pergective in Russian "signals that the action is separate from both any other action in the described event and the speech event", whereas in Serbo Croatian the speech event is excluded. The findings validate Van Schooneveld's theory which is based on "a set of semantic invariant features".

111. **Miremadi, Seyed-Ali.** "Case Relationships and the Verb Matrix in Persian and English (A Contrastive Study)". Michigan State University, 1981. 348 pp.
D. A. 42.8 (1982), p. 3584-A (8202481)
This is an attempt to describe the case frame system of Persian and to test the universal applicability of the case grammar model proposed by Longacre. An effort is made to to identify "conflicts" between case frames in Persian and English, each of which is covered separately. Predicates in Persian are shown "to be composed of a number of complex features, which in turn, determine the features of accompanying nominals".

112. **Pandharipande, Raeshwari.** "Syntax and Semantics of the Passive Construction in Selected South Asian Languages". University of Illinois at Urbana-Champaign, 1981. 260 pp.
D. A. 42.9 (1982), p. 3985-A (8203548)
This is a study of the syntax and semantics of the passive construction in six South Asian languages: Hindi, Marathi, Nepali, Kashmiri, Punjabi and Kennada. The focus is on six major problems: (1) Comparison and contrasts of linguistic features of the passive construction in the six languages, (2) adequacy of the definition of the passive proposed by relational grammar (Johnson, Keenan, Postal and Perlmutter), (3) functions which are exclusively performed by passive sentences with the assumption of the existence of the passive in the above languages, (4) regularity and systematicity of the exceptions to the passive in these languages, (5) syntax, semantics and pragmatics of the postpositions/suffixes which mark the agent in the passive sentences, (6) theoretical and empirical implications of the above topics.

113. Price, Patti Jo. "A Cross-Linguistic Study of Flaps in Japanese and in American English". University of Pennsylvania, 1981. 133 pp.
D. A. 42.3 (1981), p. 1128-A (8117837)

This study investigates the production and perception of flaps in Japanese and American English by speakers of both languages. Spectral analysis, wave form patterns and phonetic transcription are used in the description of the production data. The analysis of the perception data involves judgments by a trained phonetician as well as judgments by native speakers of both languages. The results show substantial articulatory, acoustic and perceptual similarities between Japanese flaps and American English flaps. The phonetic differences between the two languages "are best characterized in phonological terms". The substantial but incomplete overlap of flaps in both languages is used to help describe them in terms of features.

114. Song, Zino. "Complex Noun Phrases in Japanese and Korean: A Linguistic Analysis for Language Education". University of San Francisco, 1981. 248 pp.
D. A. 42.12 (1982), p. 5109-A (8211359)

The purpose of this study is to compare the syntactic and semantic relationships between the embedded sentence and the head noun in complex noun phrases in Japanese and Korean. Three types of complex noun phrases are discussed: Complemented, nominalized and relativized. The comparison of complex noun phrases in the two languages revealed syntactic similarities. The relationships between the embedded sentence and the head noun in both languages are also found to be similar. These findings are thought to have implications for second language acquisition.

115. Tsai, Shu-Shu. "Verbal Aspect: A Contrastive Analysis of Mandarin and English with Pedagogical Implications'. The University of Texas at Austin, 1981. 211 pp.
D. A. 42.3 (1981), p. 1131-A (8119386)

This study compares the semantic and grammatical functions of the Chinese perfective *-le*, progressive *-zhe* and *-zai* and experiential *-quo* to those of "equivalent" English structures. The author points out that although the same grammatical terms are used in the discussion of aspectual phenomena in the two languages, "the uses, functions and meanings" of what each of these terms represents in the two languages "do not correspond exactly".

1982

116. Al-Johani, Maneh Mahammad. "English and Arabic Articles: A Contrastive Analysis in Definiteness and Indefiniteness". Indiana University, 1982. 315 pp.
D. A. 43.8 (1983), p. 2649-A (8300813)

This study presentes a contrastive analysis of the article in English and Standard Arabic within a structural linguistic framework. The study discusses the history, pronunciation and uses of the article in both languages and it is concluded that the functions of the article in English and Arabic are very similar. It is also suggested that such similarities be used in the pedagogical context.

117. Chen, Dorothy Maria. "A Contrastive Study of the Suprasegmental Pitch in Modern German, American English, and Mandarin Chinese". University of California, Berkeley, 1982. 404 pp.
D. A. 43.8 (1983), p. 2650-A (8301716)

This study presents a contrastive analysis of pitch as used in interrogative utterances in a tone language, Chinese, and two non-tone languages, German and English.

The data consist of pre-structured textbook dialogues read by tobh native and non-native speakers of the three languages considered as well as free conversations between pairs of learners. The results show that pitch plays an important role in the three languages and that it is used to signal both grammatical sentence types and "attitudinal or pragmatic meaning".

118. Idris, Abdul Aziz. "An Analysis of the Thematic Structure and System of Logical Relations in English and Malay Expository Texts". University of Kansas, 1982. 299 pp.
D. A. 43.8 (1983), p. 2651-A (8301728)
This study contrasts English and Malay expository texts in terms of their thematic structures and "systems of logical or semantic relations" .The data consist of pre-university and university reading and composition texts in both languages. The theoretical model is based on Pike and Pike's *Grammatical Analysis* (1977). The results show that expository texts in English and Malay are "deductively developed" and that conjunctives are frequently used as theme markers. However, in English themes may also be marked by parallelism of structure while in Malay adverbials are next to conjunctions in frequency. It is also shown that superordinate-subordinate relations between themes tend to be more marked in Malay than in English.

119. Lisimba, Mukumbuta. "A Luyana Dialectology". University of Wisconsin-Madison, 1982. 620 pp.
D. A. 43.6 (1982, p. 1958-A (8220883)
The purpose of this study is twofold: To reclassify the Luyana group relative to other Bantu languages and to establish internal subdivisions of the group. External relationships are established primarily at the lexical level, whereas with internal relationships the focus is on morphology, tone and lexicon. Luyana is compared to six "control" languages. Externally, Luyana is found to be an isolate group but closer to the Angolan Languages to the West and Southwest than the group of languages to the Northeast. Internally, Luyana is classified as a dialect continuum divided into two major clusters, Eastern and Western, distinguished mostly at the lexical and phonological levels.

120. Mohammad, Mahmoud Dawood. "The Semantics of Tense and Aspect in English and Modern Standard Arabic". Georgetown University, 1982. 224 pp.
D. A. 43.9 (1983), p. 2984-A (8302774)
This study compares and contrasts "the system of tense and aspect in English and Modern Standard Arabic (MSA) in terms of their underlying semantic structures, derivational processes and surface manifestations". A generative semantics framework is used and a "new tense-aspect system" is proposed for MSA, based on the notions of "perfectivity and imperfectivity".

121. Ossorio, Janet. "Tsang Tibetan Phonology" .University of Colorado at Boulder, 1982. 129 pp.
D. A. 43.4 (1982), p. 1133-A (8221111)
This study compares the Tsang and Lhasa dialects in terms of consonants, vowels and intonation. Tsang is found to lack aspirated nasals and has palatalization. It also has a final /ʔ/ and more final consonants than Lhasa, but Lhasa has more vowel phonemes than Tsang. In Tsang nasal vowels which occur are not phonemic and the schwa is considered phonemically distinct from /a/. Tsang has the high, low, and falling tones as does Lhasa, but the distribution of the falling tone is different. Tsang instrumental case is phonologically indistinguishable from the genitive

122. RAHMAN, SHAH. "A Contrastive Grammar of English and Urdu Form Classes". Northern Illinois University, 1982. 255 pp.
D. A. 43.4 (1982), p. 1134-A (8220310)
This is a contrastive study of the structural features of English and Urdu form classes (verbs, adjectives, and adverbs) within a framework of structural grammar. They are each described separately, then discussed in terms of inflection, derivation, function words, position and superfix ,the main focus being on the differences between English and Urdu. The underlying assumption of this study is that the similarity or difference in the use of a structural device in English and Urdu impedes or facilitates the learning of each of these languages by the speaker of the other.

1983

123. AHMAD, NANGSARI. "The Beginnings: The Initial Strategy of Text-Building in Classical Malay and Modern Indonesian Narratives". The University of Michigan, 1983. 372 pp.
D. A. 44.2 (1983), p. 475-A (8314227)
This study describes the differences and similarities in the modes of text-building in classical Malay and modern Indonesian as evidenced in the initial sentences of narratives in the two languages. Detailed analyses of sample initial sentences in terms of "intra-textual and extra-textual" relations is presented.

124. AL-ASWAD, MOHAMED KALEEFA. "Contrastive Analysis of Arabic and English Verbs in Tense, Aspect, and Structure". The University of Michigan, 1983. 265 pp
D. A. 44.10 (1984), p. 3046-A (8402233)
This study presents a contrastive analysis of Arabic and English tense, aspect and structure. The results show that Arabic and English indicate tense through morphological forms and that each has two tenses, the perfect and imperfect in Arabic, and the past and non-past in English. These tenses seem to have similar functions. With respect to aspect, both languages have a major aspectual distinction, the perfective/imperfective, with subclasses which include the progessive, predictive, habitual and generic. The study also shows how the verb structures in Arabic and English are different.

125. ATARI, OMAR FAYEZ. "A Contrastive Analysis of Arab and American University Students' Strategies in Accomplishing Written English Discourse Functions: Implications for EFL". Georgetown University, 1983. 256 pp.
D. A. 44.10 (1984), p. 3047-A (8401491)
This study contrasts the stylistic features of Arab and American University students' written English. The data consist of 30 letters of complaints and 30 letters of promising written by students majoring in English from Bethlehem university on the West Bank of Jordan and American students in the linguistics program at the American University in Washington, D. C. The results show that the Arab students include a broad statement in the opening sections of their compositions before the topic sentence is introduced, elaborate on one topic frame and not the others and neglect to connect the constituent topic frames. It is suggested that these strategies run counter to the native reader's expectations which makes the intended message unclear.

126. BRILL, JANA ALENA. "Past Times in French: A Study of the Passé Simple-Passé Composé distribution, with Reference to Spanish and Italian". University of California, Santa Barbara, 1983. 185 pp.
D. A. 44.10 (1984), p. 3047-A (8401735)
Diachronic and synchronic distributions of simple and compound past tense forms in French are studied in relationship to "current trends in Romance". "Discussive French" is contrasted with "narrative French". The simple and compound tense forms "were in temporal complementary distribution" in pre- 1900 French but this relationship has been "neutralized" in the discursive mode in Modern Standard French. An analysis of 300 personal letters in current French, Italian and Castilian Spanish shows a "preference for the compound form" in discursive, "yet written French". The Spanish letters on the other hand, "refuted predictions of a similar shift" in Castilian. The letters studied from Northern Italy strongly support the "reported compound past preference". Other findings, e.g., a confusion of *être* and *avoir*, are also reported.

127. JACKSON, FREDERICK HENRY. "The Internal and External Relationships of the Trukic Languages in Micronesian". University of Hawaii, 1983. 481 pp.
D. A. 45.1 (1984), p. 170-A (8408964)
This study presents a comparison between the Trukic languages of Micronesia with the purpose of establishing the linguistic integrity of the Trukic group of Oceanic, forming a principled hypothesis of subgrouping within the Trukic group and identifying the languages that are most closely related to this group. The study includes a discussion of consonant correpsondences between Proto-Oceanic and the Trukic languages, and a reconstruction of the phonemic system of Proto-Trukic. Also presented are descriptions of the sound system of Modern Trukic and the phonological correspondences between Trukic and Micronesian.

128. KUIPERS, FLORENCE GERTRUDE. "A Comparative Lexicon of Three Modern Aramaic Dialects". Georgetown University, 1983. 337 pp.
D. A. 44.10 (1984), p. 3050-A (8401503)
This study presents a comparative lexicon of Modern Aramaic dialects, Telkeppe Chaldean, Assyrian and Turoyo. The data were collected from native speakers living in the United States and are considered as a source material "for a more comprehensive comparative study of Modern Aramaic".

129. KUMATORIDANI, TETSUO. "The Structure of Persuasive Discourse: A Cross-Cultural Analysis of the Language in American and Japanese Television Commercials". Georgetown University, 1983. 263 pp.
D. A. 45.1 (1984), p. 171-A (8409428)
The study compares the communicative process and information structure of Japanese and American television commercials, which are viewed as a type of persuasive discourse. Eighty-eight American and Japanese award-winning commercials are analysed. The results show that the American commercials introduce the central theme more "objectively, straightforwardly and argumentatively" and have a tendency to place the more important elements toward the beginning of the phrase, clause and text whereas the opposite tendency is true for the Japanese commercials. It is suggested that these differences are due to different social cultural expectations about commercials and different "politeness behavior".

130. **Michelson, Karin Eva.** "A Comparative Study of Accent in the Five Nations Iroquoian Languages". Harvard University, 1983. 512 pp.
D. A. 44.6 (1983), p. 1778-A (8322414)

This study compares accentual processes in the Iroquoian languages, Mohawk, Oneida, Onondaga, Cayuga and Seneca within a non-linear theory of phonology that includes the notion of syllable. The analysis is based on fieldwork by the author and published works by other authors. The study includes explanations of the relevant historical changes in individual languages, especially "e-epenthesis" in Mohawk and "r-loss" in Onondaga.

131. **Panakul, Thanyarat.** "A Fnuctional Analysis of English an Thai Pasisve Constructions". Northwestern University, 1983. 207 pp.
D. A. 44.11 (1984), p. 3375-A (8403455)

This study compares passive constructions in English and Thai in order to determine the difficulties that Thai students have in using the English passive. Five Thai constructions, which are "usually translated into the English passive form" are examined: The *thuuk* passive, the *daayrap* passive, sentences involving topicalization without agent, indefinite subject sentences, and sentences containing topicalization with agent. These constructions are compared with the English passive in terms of their forms and functions and two "hypotheses about certain categories of Thai and English passives" are formulated. The hypotheses are then empirically tested to try to understand Thai students' use of the various constructions in both languages.

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